LOYOLA ACADEMY
OLD ALWAL, SECUNDERABAD - 500 010, TELANGANA, INDIA
(Autonomous and Affiliated to Osmania University)
A "College with Potential for Excellence" by UGC
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B.Sc.
ProgrammeOutcomes

PO1:ScientificKnowledge. ApplytheknowledgeofScience,Mathematics,Engineering& Technology fundamentals to solve the complex problems**.**

PO2:**Design/developmentofsolutions**:Designsolutionsforcomplexengineeringproblemsand design system components or processes that meet the specified needs with appropriate considerationfor the public health and safety, and the cultural, societal, and environmental considerations.

PO3:Problemanalysis: Identify,formulate,researchliterature,andanalyzecomplexscientific problemsreachingsubstantiatedconclusionsusingfirstprinciplesofmathematics,natural sciences, and engineering sciences.

PO4:Moderntoolusage: Create,selectandapplyappropriatetechniques,resources,andmodern technology and IT tools to complex science and technological activities.

PO5:Environmentandsustainability: Understandtheimpactofprofessionalscienceand technological solutions in societal and environmental contexts and for sustainable Development.

PO6:Individualandteamwork: Functionobjectivelyasanindividualandasamemberin diverse teams.

PO7:Communication: Communicateeffectivelyoncomplexscience&technologyactivities with society at large and able to write effective reports and documentation.

PO8.Life-longlearning: Recognizetheneedandabilitytoengageinindependentandlifelong Learning in the context of technological change.

B.Sc.ChemicalTechnology

ProgramSpecificOutcomes:

Studentswillbeableto:

PSO1: Understand thebasicconceptsofMaths,PhysicsandChemistrytoapplyinthefieldof Chemical Technology.

PSO2: Understand thebasicconceptsofvariousunitoperationsandunitprocessesinChemical Technology

PSO3: Applythetheoreticalknowledge,problemsolvingtechniquesandskillsacquired through practicals in Chemical and Pharmaceutical industries.

PSO4: Designtheequipmentrequiredtocarryoutthevariousunitoperationsandunitprocesses in Chemical and Pharmaceutical industries.

PhysicsI

CO1: Applythelawsofmotiononvariablemasssystemsandexplaintheconservation principles of mechanical energy and momentum

CO2: Distinguishthemechanicsofrigid bodieswithrespecttokinematics. Analyzetheprinciplesofinterferenceoptics.

CO3: Explainthemechanicsof continuousmedia andsolveproblems.

CO4: Categoriesdifferentsemiconductorsofsolidsandanalyzebasicelectronicsofrectifiers and diodes.

CO5: Applytheprinciplesoffiber opticsfor signalpropagation.

PhysicsII

CO1: Explainthefundamentalsofvibrationsandtheconceptof MeissnerEffect&BCS theory of superconductivity.

CO2: CompareDampedandforcedoscillationsanddistinguishdifferenttypesoflasersandits applications.

CO3: DistinguishFresnel's,Fraunhoferdiffractionandanalysewavelengthofmonochromaticlightand Grating. Analyze ultra-Sonic's to determine velocity of sound in different media.

CO4: AnalyzePolarization,Doublerefraction,opticalactivityandidentifyitsroleindesigningNichol's prism, Half-shade polarimeter.

CO5: Applycrystallographyprinciplesofsolidstatephysicstoexplainpackingfractionsandcrystal structures of solids by Laue, Powder diffraction methods.

PhysicsIII

CO1: UseGauss'sLawprincipletoexplainchargedsphere,cylinder,andpotentialdueto charged spherical conductor and Solve problems.

CO2: AnalyzeNanosciencetechnologyandsurveydifferenttypesofNanomaterials,Synthesis of Nano particles and its applications.

CO3: Comparevarioustypesoftransistorsandanalyse CB-CE-CC configurations,Hybrid parameters.

CO4: Explain thephysicsofPassiveElectronic componentsandMagnetostatics.

CO5: Classifydigitalelectronicsofbinarynumbersystem,itsconversionsandanalysedifferent amplifiers, Oscillators.

PhysicsIV

CO1: Analyzemovingchargeinelectricandmagneticfield,Identifyit'sroleinparticle accelerators, magnetic field due to straight wire and circular coil.

CO2: Comparetheeffectsofelectromagneticinductioninmovingconductors,solenoid, Transformers and survey digital electronics of Logic Gates.

CO3: Comparevarying andalternatingcurrentsthroughL-R, L-C,C-RandL-C-R circuits.

CO4: ApplythePrinciplesofQuantummechanicsandwavemechanicsinsolvingquantum problems.

CO5: AnalyzeNuclearstructure,Bindingenergy,nuclearforcesandsurveydifferentnuclear models.

ChemistryI

CO1: Analysethestructureofvariousmolecules/ionsbased onLCAO,MOT.VESPER theory.
CO2: Explainthesynthesisandstructure ofS&Pblockelements
CO3: Explainsthefundamentalsandunderstanding ofextractionofmetalsandalloys
CO4: ExplainthefundamentalsofOrganic molecules
CO5: ExplaintheOrganicre4actionreactionmechanisms

ChemistryII

CO1: Analysetheenergy change inagivenphysical/chemicalprocesses
CO2: Applytheconceptof feasibilityofprocesses
CO3: ExaminetheColligativeproperties byvariousexperiments
CO4: SummarisationofBasicgaslaws andtheirdeviationanddemonstration
CO5: Explainthevariousphasesinaheterogeneoussystem,applytheconcepttoseparate various phases.

ChemistryIII

CO1: Explainsynthesisandproperties ofHalogens,Alcohols,Phenolsand Ethers
CO2: Comparethesynthesisand properties ofAldehydes and ketones
CO3: Explainthepreparation, properties of'd'and 'f'Blockelements
CO4: Comparetheelectricalconductivitiesofvarious Conductorsandtheirrelatedlaws
CO5: EvaluateCellPotential,ComparevariousElectrodes andtheirfunctions

ChemistryIV

CO1: Compare preparation and properties of Aliphatic and Aromatic Carboxylic Acids
CO2: CompareSynthesisandpropertiesofNitrocompoundsandHeterocycliccompounds **CO3:**
Synthesis and structural analysis of Carbohydrates and Amino Acids
CO4: InterpretationofMetal Complexesbased onLFT,CFTandMOT
CO5: ApplicationofCatalyst,ReactionmechanismofcomplexesandOMC,preparationand properties and their uses

ChemistryV

CO1:DeterminetheExtraction,structureandusesofAlkaloids,Terpenoids,SteroidsandDye stuffs
CO2:Application ofPolymers, developmentofPolymers and Rubbers
CO3:Classificationof Drugs,demonstrationof drugsandexplanationoftheir action
CO4:Explain theFundamentalconceptsofSpectroscopic techniques
CO5:EvaluateOrderand Molecularity ofreactions,applicationofPhotochemicalreactions

ChemicalProcessPrinciples

CO1:Solveproblemstocalculatecompositionofsolidsandfluidsanddensityofgaseous mixtures.
CO2:ApplyRoult'sLaw andDalton'sLaw tosolveproblemsingaseousmixtures

CO3:Solvematerialbalanceproblemswithandwithoutchemicalreactions.
CO4:Applyenergy balance tocalculateenthalpychanges
CO5:Useenergy balancetocalculateenthalpychangesaccompanyingchemical reactions.

ChemicalReactionEngineering

CO1:Classifychemicalreactions,definerateequationandcantestmechanism.
CO2:Explainthedependencyofrateconstantontemperaturefromdifferenttheoriesand Calculate rate constant
CO3:Userateequationtocalculatethespecificrateconstantandtheorderofthereactionfor irreversible reactions in case of constant volume Batch Reactor.
CO4:UserateequationtocalculatetherateconstantforreversiblereactionsincaseofConstant Volume Batch Reactor and rate constant in case of Variable Volume Batch Reactor.
CO5:Usetheperformanceequation todesign singleidealreactors.

EnvironmentalEngineeringandSafety

CO1: Classifytheindustrialeffluents andOxygenDemands.
CO2: Selectasuitableequipmentandtreatmentprocesstocontrolpollutioncausedbyindustrial liquid wastes.
CO3: Selectasuitableequipmentandtreatmentprocesstocontrolpollutioncausedbyindustrial gaseous effluents and solid waste.
CO4: Explainthesafetyaspectsofachemicalindustrysuchashazardsinvolvedinthechemical industry and preventive measures to be taken.
CO5: Identifytheeffectsoftoxicagentsonhumanhealthandwillbeabletounderstandhowto handle flammable materials in chemical industries

Heat Transfer

CO1: ApplyFourier'slawofheatconductiontocalculaterateofheattransferbyconductionin solids.
CO2: Applythedifferentequationsfordifferentsituationstocalculatetherateofheattransfer through fluids without phase change by convection.
CO3: Explainheat transfertofluidswithphase change.
CO4: ExplaintheconstructionandworkingofHeatExchangers.
CO5: Explaintheconstruction andworkingof evaporators.

RefractoryTechnology

CO1: Classifyandselect therefractorymaterials
CO2: Describethemanufacturingprocedure,propertiesandusesofsomeimportantrefractory materials.
CO3: Identify therefractory'sused inIron andSteel,Glassand Cementindustries.

CO4: Explain the testing procedures for some important properties of refractory materials and describe the properties and uses of insulating refractories.
CO5: Choose the special refractories for specified applications and describe refractory cement.

Mathematics-I

CO1: Construct the vector-valued functions of a real variable and their curves, Gradient vector fields and constructing potentials. Define the directional flow especially in the description of electromagnetic fields, fluid flow in physical sciences.
CO2: Identify the importance of vector fields in day to day life. Calculate the mass, area and momentum and also measure the energy of steady flows using integrations.
CO3: Develop factual knowledge including the mathematical notation and terminology in geometry; points, lines, and angles; planar figures.
CO4: Describe the surface area of sphere-great circle and volume of sphere, cone.
CO5: Apply matrix theory to solve homogeneous and non-homogeneous system. Define Eigen values and Eigen vectors.

Mathematics- II

CO1: **Classify** the differential equations with respect to their order and linearity. Solve differential equations of first order using numerical and analytical methods such as Integrating Factors.
CO2: **Solve** higher order non-Homogeneous Equations with Constant Coefficients. Obtain exact and numerical solutions using differential equations technology.
CO3: **Solve** higher order non-Homogeneous Equations with variable Coefficients. Obtain exact and numerical solutions using differential equations technology.
CO4: **Identify** the relationship between a real function and its derivative at a point which in turn helps them solve the system using integrations.
CO5: **Identify** different tests for convergence and divergence of a given series.

Mathematics- III

CO1: **Categorize** the theoretical and practical aspects of the use of numerical methods.
CO2: **Explain** how the common numerical methods are used to obtain approximate solutions to intractable mathematical problems.
CO3: **Develop** numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
CO4: **Analyze** and evaluate the numerical solution of algebraic equations.
CO5: **Develop** numerical methods to fit a curve within the given points.

Mathematics- IV

CO1:Statethedefinitionofasimplegroup,calculatecompositionfactorsandcomposition series of certain groups. Use the subgroup criterion to prove that various subsets are subgroups of some given group.
CO2:Explainwhetheragivengroupiscyclic,andgivenafinitecyclicgroup,findagenerator for a subgroup of a given order.
CO3:Identify homomorphismina group, determinewhether ornottheyare isomorphic.
CO4:**Analyse**theFourier transformofelementaryfunctions fromthe definition.
CO5:SolveWave,heat and Laplace equationsusingFourier transform.

Chemical Technology-II

CO1:ExplainNuclearmaterials
CO2:Explain naturalproductindustries,soaps anddetergents
CO3:Describemicroware,biotechnology, isolation,cultivationandgrowthofmicro organisms
CO4:Explainpulpandpaper industry
CO5:Explainfoodindustry

Instrumentation & Process Control

CO1: Explainthequalitiesofmeasurement
CO2: Chooseasuitablethermometer foragivenapplicationanddescribethemethodsfor composition analysis of moisture in gases
CO3: Explainvariouspressureandvacuummeasurementinstrumentsandprocess instrumentation
CO4: Describetheroleof processdynamicsandcontrol
CO5: Describecontrollers andfinal controllerelements

MassTransferOperations--I

CO1: Describethe principlesof diffusion
CO2: Explain the principle of distillation and types of distillation
CO3: Analysis of fractionating column by Mecab Thiele Method
CO4: Explain the principle and applications of Leaching process
CO5: Explaintheprinciplesofextractionandextractionequipment

MassTransferOperations- II

CO1: Explaintheprincipleandapplicationsofabsorptionandwillbeabletodesignpacked column
CO2: Describehumidityanditsmeasurementandequipmentforhumidificationoperations
CO3: Choosedryingequipmentandwillbe abletodocalculationsin drying
CO4: Choosesuitableequipmenttocarryoutadsorption
CO5: Explainmembraneseparationprocessandwillbeabletoclassifymembranes

Organic Surface Coatings Technology

CO1: Describetheorganicsurfacecoatings.

CO2: Explainpigments and extruders.
CO3: Explainresins,plasticizersandadditives.
CO4: Explainpaintswithreferencetotestingandapplications.
CO5: Selectcoatings fordifferent applicationsinchemicalindustries.

ChemicalTechnology-I

CO1: Basicknowledgeofdescribingachemicalindustry. Explainmanufacturingofsulphurand sulphuric acid
CO2: Explainmanufactureofindustrialfuelgases. Explainmanufactureof oxygen
CO3: Explainmanufactureofammonia&urea.ExplainmanufactureofNitricacid& Ammonium nitrate
CO4: ExplainmanufactureofChloroalkaliindustries
CO5: Explainmanufactureofcement.Explainmanufactureofmagnesiumcompoundsfromsea water

ChemicalTechnology-II

CO1: Identifybasicrefineryoperations.ExplainmanufacturingofMethanol,Vinylchloride
CO2: ExplainthemanufacturingofAcetone,AcrylonitrileExplainthemanufactureofIsoprene, Butadiene.
CO3: Explainthemanufacture ofaromatic hydrocarbons
CO4: Explainthemanufacture of pesticides.
CO5: Explainthemanufacture of polymers.

FluidMechanics

CO1:Understand ofbasicunitanddimensionsinfluidmechanics.Describebasicprinciplesof fluid mechanics
CO2:Identifyfluidflowproblemswiththeapplicationof themomentumandenergyequations. Describefrictionandlossesinfluidflows.
CO3:Capabilitytoanalyze pressuredropsinpackedbedKnowledge of fluidization.
CO4:CapabilityofmeasuringflowsKnowledge offlow meters.
CO5:Describepipinglayout.Describe equipment'sintransportationof fluids

SolarProcessingTechnologies

CO1: Identify differentformsofenergies. Describetransformationofenergy.
CO2: Identify theneedforenergyconservation.Describesignificanceofsolar energy
CO3: Describeharnessingofsolarenergy.
CO4: Describeapplications ofsolar energy
CO5: Identify ISOstandardsforsolarapplications

MechanicalUnit Operations

CO1: Explainagitationequipment,flowpatternsanddesignofpowerrequiredforagitation equipment. Explainmixers for pastes and free flowing solids
CO2: Identify theneedforscreenanalysis andstorageofsolids.Explainconveyingsystems.

CO3: Explainsizereductionequipment's.Capabilityofproblemsolvingpertainingtosize reduction equipment's
CO4: Identifytheneedforsizeseparations.Explainscreeningequipment's
CO5: Explaincentrifugalseparationprocess.Explaincrystallizationequipment.

B.ScAgriculturalScienceandRuralDevelopment

PSO1: Knowledgeoncropproduction andcrop improvementtechniques.
PSO2: Knowledgeonfarmmanagementeconomics,variousagriculturalextensionmethods and communication techniques to serve farming community and industries.
PSO3: Todevelopscientific,technicalandpracticalskillsrelatedtolabandfieldinvarious plantandanimalrelatedcourses withcritical thinkingandstrongethicalfoundation.
PSO4: Developsentrepreneurshipqualitiesatvariouslevelsbytakingaptdecisionsto enhance the success of an agricultural enterprise or an organization.

FundamentalsofAgronomy&Agricultural Heritage

CO1:ClassifyagroclimaticzonesofIndiaandTelangana,explainvariousmethodsofsowing and tillage.
CO2: List of various methods of weed control and irrigation
CO3:Classifymanuresandfertilizersandexplainplantideotypes
CO4: Explain various practices of indigenous technology
CO5:Describeagriculturalheritage, differentcivilizationsandhistoryofagriculturedevelopment

FundamentalsofGenetics

CO1:Expressknowledge onMendel'sLaws
CO2:Classifytypesof alleles
CO3:Explain chromosomalaberrationsandsolvesproblemsonchisquare
CO4:Classifymutationsandextrachromosomalinheritance
CO5:Analyzesthestructureandexpressionofgene

FundamentalsofSoilScience

CO1:Definessoilanddescribesdifferentsoilformingprocesses,explainssoilprofileand differentiates surface soil and subsurface soil
CO2:Explain differentPhysicalproperties ofsoiland theirinfluenceoncropgrowth
CO3:Explain differentchemicalandbiologicalpropertiesofsoilanditsimportanceinagriculture
CO4:Differentiatesandexplainsroleoforganicmatterandhumus.Describescarboncycleand C:N ratio
CO5:ClassifydifferentsoilgroupsofIndia,TelanganaandA.P

IntroductionToPlantPathogens

CO1:Illustrates pathogenic fungiandtypesofreproductioninfungi

CO2:ClassifyKingdom Fungi intophylum,sub phylumandorders
CO3:RecognizesphylumAscomycotaandBasidiomycotawith examples
CO4:Differentiates Rust,SmutandBuntFungi
CO5:Illustrates variousplantparasiticvirusesandnematodes

Fundamentals of Agricultural Economics
CO1:Explainbasicconceptsinmicroeconomics
CO2:Distinguishconsumerbehaviouranalysis,ICanalysisanddemandanalysis **CO3**:
Interrelate among production, cost concepts, supply and market structure **CO4**:
Illustrate the functions of money and national income
CO5:Applyvariouseconomicsystemsindailylife

FundamentalsofHorticulture
CO1: Define various branches.
CO2:Distinguish methodsof Propagation.
CO3:Identify andexplainvariousvegetativepropagation Method
CO4:Distinguishanddifferentiategrowthregulatorsand effects
CO5:Classifyand compareirrigationandfertilizerapplication methods

RuralSociologyandEducationalPsychology
CO1:Describetheimportanceofrural sociology inagriculture extension.
CO2: Explain different concepts in rural sociology like social stratification, culture, social institutions, social change and social ecology
CO3:Explaintheconceptofrural developmentinIndia.
CO4:Explaintheimportanceofeducationalpsychologyinagriculturalextensionwithspecial emphasis on leadership, personality and motivation
CO5:Applyvarioustheoriesofmotivation,intelligence,processofteachingandlearningwith special reference to extension teaching.

Agrometeorology&ClimateChange
CO1: Define meteorology, climatology, Agrl. Meteorology, wind, types of wind and describe structure of atmosphere
CO2:Explain solar radiation, factors affecting distribution of solar radiation, atmospheric temperature and its importance
CO3:Differentiatebetweenprecipitationandcondensationandidentifytheir different forms
CO4: Classify and explain characteristics of different clouds. Explain south west and north east monsoons
CO5:Identify weatherhazards andcategorizetypesofweather forecasting

IntroductionTo Forestry
CO1:Defines variousbranchesofforestry, silvicultureand itsclassification
CO2: Explain various forest policies and types of regeneration
CO3:Describesdifferenttendingoperationsfollowedinforestry **CO4**:
Explain importance of agro forestry in India
CO5:Select suitablepracticesforraisingSubabulandEucalyptus

AgriculturalMicrobiology

CO1:Describevariouscontributionsofeminentscientistsinmicrobialworld.
CO2:Explainmorphologicaltypesofbacteria,bacteriacellstructuremicrobialnutrition, metabolic pathways & growth cycle of bacteria.
CO3:Explainbacterialgenetics,roleofmicrobesinfertilityofsoilsandplantgrowth,cycleof major elements Co2, N2.
CO4:DifferentiatetypesoffermentationandidentifyPGPRorganismsandbiologicalnitrogen fixation
CO5:PrepareBiofertilizers,biopesticides,silage,biofuel,biogas,biomanuresandtheir production technologies,

FundamentalsOfEntomology

CO1:Explainsthehistory,Scopeandimportanceofentomologyandinsectbodywallandbody segmentation
CO2:Identifyandrecognizevariousstructuresandfunctionsofinsectantenna,legs,wingsand different types of larval and pupal forms of insect.
CO3:Illustrates variousphysiologicalsystemsofinsectbody
CO4:DescribesthecharactersofinsectsbelongstotheordersOrthoptera,Isoptera.Thysanoptera, Lepidoptera and develops ability to identify various insects
CO5:IdentifythecharactersofinsectsbelongstotheordersColeoptera,Hymenoptera,Diptera, Hemiptera and develops ability to identify various insects

FundamentalsofCropPhysiology

CO1:Explaintheimportanceofcropphysiology,cropwaterrelationsandseedgermination
CO2:Applytheknowledgeofphotosynthesisandrespirationinincreasingcropproductivity **CO3**: Apply the knowledge of nutrio-physiology and flowering physiology inincreasing cropproductivity
CO4:Explainsthe roleofplantgrowthregulators inagricultureandhorticulture
CO5:Analyzegrowthanddevelopment ofmajor crops

SoilandWaterConservationEngineering

CO1:Explain importanceofsoilandwaterconservation, water erosion
CO2:Explain erosioncontrolmeasures
CO3: Explain irrigation water measurement techniques
CO4:Describeirrigationpumpsanddischargecalculation
CO5: Explain drip and sprinkler irrigation system

ProtectedCultivationAndSecondaryAgriculture **CO1**:
Describe the various types of greenhouses
CO2:Illustratestructureanddifferentmaterialsforconstructionofgreenhouse
CO3: Explain the different irrigation systems used in greenhouse
CO4: Explain winnowing, winnowers and moisture measurement
CO5:Explain types ofmechanicaldryingand handlingequipment

FundamentalsofPlantBiochemistryAndBiotechnology

CO1:Identify thestructures and importanceofcarbohydrates and lipids
CO2:Classifypeptides,proteinsandenzymes
CO3:Explain structureofnucleicacidsandillustrate metabolism
CO4:Preparenutrientmediaanduseofvariouscultures
CO5: Analyzegeneticengineering techniques

CropProduction–I
CO1: Explains various crop production techniques from sowing to harvest for Rice and wheat
CO2:Explainsvariouscropproductiontechniquesfromsowingtoharvestformaizeandsorghum **CO3**:
Explains various crop production techniques from sowing to harvest for pearl millet, finger millet,foxtailmillet,kodo-millet,proso-milllet,little-millet
CO4:Explainsvariouscropproductiontechniquesfromsowingtoharvestfor Redgram,Bengal gram, green gram, black gram, cowpea, horse gram
CO5: Explainsvariouscropproductiontechniquesfromsowingtoharvestfordifferentforage crops

DrylandAgricultureandWaterShed Management
CO1:Differentiatedryfarming,drylandfarmingandrainfedfarming,classificationofLandUse and various types of drought
CO2:Identify variousdry farmingimplementsanddescribevarious typesof tillage
CO3:Explain variousalternatelandusesystems and Drylandtechnologies forblack andredsoils
CO4:Classifyof varioustypesoferosionandmulches
CO5:Choosevariousmoistureconservationmeasuresandconceptsofwatershedmanagement

WeedsandTheir Management
CO1: Classifyweedsbasedonvariouscriteria
CO2:Classifydifferentmethodsofweedcontrolandherbicides
CO3: Analyzethemodeof actionof herbicidesand errorsinherbicide application
CO4:Explainselectivityofherbicidesandinteractionofherbicideswithfertilizersand agrochemicals
CO5:Compareweedmanagementpracticesof cereals,pulses,oilseeds,vegetablesandorchards

CellBiologyandPlantGenetics
CO1:Identifyandrecognizethefunctionofvariouscellorganelles
CO2:Explaintheprocessofcelldivisionandtoexplainchromosomalabberation**CO3**:
Sketch the nature of genetic material and recognize the nature of DNA **CO4**:
Distinguish between allelic and non-allelic interaction
CO5:Analyzethestructure andexpressionofgene

IntroductiontoPlantPathology&PlantDisease Control
CO1: Illustratespathogenicfungiandtypesofreproductioninfungi
CO2: Classify Kingdom Fungi intophylum, sub phylum and orders
CO3: Recognizes phylum Ascomycota and basidiomycota
CO4:Differentiatesrust,smutandbuntFungi
CO5:Illustrates variousplantparasiticvirusesandnematodes

PrinciplesofCrop Physiology

CO1: Explain the importance of crop physiology, crop water relations and seed germination
CO2: Apply the knowledge of photosynthesis and respiration in increasing crop productivity
CO3: Applytheknowledgeofnutrio-physiologyandfloweringphysiologyinincreasingcrop productivity
CO4:Explainsthe roleofplantgrowthregulators inagricultureandhorticulture
CO5:Analyzegrowthanddevelopment ofmajor crops

AgriculturalChemicals

CO1:Differentiateorganiccompoundsand inorganiccompounds
CO2:Classifyinorganicinsecticideswithexamples
CO3:Illustratevariousorganic,natural andsyntheticinsecticides
CO4:Understandsvarious organochlorine,carbamateandphosphorus compounds
CO5:Analyzes variousfungicidesand pesticideresidues influenceonenvironment

IrrigationWaterManagement

CO1:Classifymajor,mediumandminorirrigationprojects
CO2:Solvesampleproblemsonavailablesoilmoistureandexplainvarioussoilmoisture constants
CO3:DifferentiateNetandGrossIrrigationrequirementsandsubdivideindirectmethodsofsoil moisture estimation
CO4:Judgedifferentapproaches ofschedulingirrigation anddifferentmethodsof irrigation
CO5:Explain variousirrigationefficiencies andwatermanagementpracticesfordifferent crops.

SoilFertility,ManuresandFertilizers

CO1:Defineandlistoutmacroand micronutrient
CO2:Differentiateand ClassifyManures and Fertilizersand differentcompostingmethods
CO3:Explaincharacteristicsandmanufacturingprocessofnitrogenous,phosphaticandpotassic fertilizers.
CO4:Differentiateand classifycomplex,mixedandbio-fertilizers
CO5:Compare andjudgevariousmethodsofsoilfertilityevaluation

Entomology–II(TaxonomyAndPestControl)

CO1:Explainstheprinciplesofinsecttaxonomyandclassifytheclassinsectaanddescribesthe characters of insects belongs tothe orders Coleoptera, Lepidoptera, Isoptera and develops ability to identify various insects.
CO2:DescribesthecharactersofordersHemiptera,DictyopteraandThysanopteraanddevelops ability to identify various insects
CO3:IdentifythecharactersofordersHymenoptera,DipteraandOrthopteraanddevelopsability to identify various insects
CO4:Explainthemethodsofpestcontrolandapplyknowledgeonapplicationofpestcontrol methods
CO5: ApplytheconceptsofIPMandrecentmethodsofpestcontrol

IntroductiontoPlantBiotechnology

CO1: Choosedifferentsterilizationtechniquesandcultures
CO2:Identify techniques intissue culture
CO3:Explainmethodsofsomatichybridizationandcryopreservation
CO4:Identifymethodsofgene transfer
CO5:ExplainsprocedureofPCR

Rural Development

CO1:Describethedifferentconceptsinvolvedinruraldevelopmentandmemorizedifferentrural development programs of India during pre-independence and post-independence era.
CO2:Appraisethelinkagebetweendemocraticdecentralizationandrural development
CO3:Selectthedifferentagriculturaldevelopmentprogramsandsocialjusticeandpoverty alleviation programmes in India
CO4:Distinguishbetween administrationand management
CO5:Choosepeople'sparticipationasoneofthemajorfactorsforsuccessfulimplementationof rural development programmes with special focus on women

CropProduction-II(OilSeeds&Commercial Crops)

CO1:Explainsvariouscropproductiontechniquesfromsowingtoharvestfor Groundnut,Sesame, Soybean, Sunflower
CO2:Explainsvariouscropproductiontechniquesfromsowingtoharvestfor Safflower,Castor, Rapeseed & Mustard, Linseed, Niger
CO3: Explainsvariouscropproductiontechniquesfromsowingtoharvestfor Cottonand Sunhemp
CO4:Explainsvarious cropproductiontechniquesfromsowingtoharvestfor Jute,Mesta,Agave
CO5:Explainsvariouscropproductiontechniquesfromsowingtoharvestfor Sugarcane,Sugar- beet, Tobacco

PrinciplesofPlantBreeding

CO1:Recognizesthebenefitsofplantbreedingandcropgeneticresources
CO2: Interpret the methods of breeding and to illustrate the methods**CO3**:
Explain the importance of different breeding methods
CO4:Compare themethodsofpopulation improvement
CO5:Formulatespecialbreeding methods

CropPests andTheir Management

CO1:Identifythehostrange,natureofdamage,damagingsymptoms,lifecyclesand management of different pests of cereal crops.
CO2:Identifythehostrange,natureofdamage,damagingsymptoms,lifecyclesand management of different pests of Fiber crops, oilseeds and pulse crops
CO3:Identifythehostrange,natureofdamage,damagingsymptoms,lifecyclesand management of different pests of Coconut and fruit crops.
CO4:Identifythehostrange,natureofdamage,damagingsymptoms,lifecyclesand management of different pests of vegetable crops

CO5:Identifythehostrange,natureofdamage,damagingsymptoms,lifecyclesand management of pests of stored products

ProductionandFarmManagementEconomics

CO1: Analyze laws of returns and factor product relationship
CO2:Judgeinputoutputrelationshipinagriculturalproduction **CO3**:
Apply cost analysis in agricultural production
CO4:Make uplawofequi-marginalreturns inagriculturalproduction
CO5:Distinguish typesandsystems offarming

FarmEquipmentandMachinery

CO1:Generalizestypesofenginesandsolvesproblemsrelatedtomechanicalpower **CO2**:
Explain fuel system, cooling system and solves problems on tractor power **CO3**:
Differentiates types of ploughs and their parts
CO4:Classifyvarious harrows,cultivatorsandotherimplements
CO5:Sketches variousfertilizerandseeding equipments

ProductionTechnologyofVegetables,AromaticsAndMedicinalPlants

CO1: Describe various production techniques in Solanacious vegetables
CO2: Apply various cultural operation to produce cruciferous vegetable
CO3: Explain different cultivation practices in leguminous vegetables
CO4: Explain techniques of producing Essential oil from Aromatic crops
CO5: Appraise Importance of medicinal values of different plants

AgriculturalExtension&ProgrammePlanning

CO1:Explaintheimportanceofextensioneducationinagriculture sector.
CO2:Organizedifferentagriculturalextensionmethodswithreferencetogroupcontact methods.
CO3:Organizedifferentagriculturalextensionmethodswithreferencetomasscontactmethods.
CO4:Applytheprinciplesofjournalisminagriculturalextensionandpreparedifferenttypesof Audio Visual aids
CO5:SolvingoftheproblemsofvillagesbyapplyingParticipatoryRuralAppraisal(PRA) technique

SeedScienceandProduction Technology

CO1:Describes concepts ofseedqualityand genetic purity
CO2:Interpret thevarietalandhybridseed productiontechniques ofvariouscrops
CO3:generalizevarioustechniquesofhybridseedproduction **CO4**:
Explains steps in seed processing and field inspection **CO5**:
Judges IPRs and their relevance in seed industry

AgriculturalCooperation,Finance&Marketing

CO1: Appraisetheagriculturalco-operationmovement inIndia
CO2:Illustratecooperativecredit structure
CO3:Distinguish between3R's,5C'sand7P's
CO4: Differentiatebetweenregulatedandco-operativemarkets

CO5:Combinemarketableandmarketed surplusinagriculturalmarketing

CropDiseases&TheirMangement

CO1:Identify differentdiseases ofcereal crops andgainknowledgeabouttheir management.
CO2:Identify differentdiseasesofoilseedcrops and gainknowledgeabouttheir management.
CO3:IdentifydifferentdiseasesofPulses,FlowerandSpicescropsandgainknowledgeabout their management.
CO4:Identify differentdiseases ofVegetable cropsand gainknowledgeabouttheir management.
CO5:IdentifydifferentdiseasesofHorticulturecropsandgainknowledgeabouttheir management.

ProductionTechnologyofFruits.SpicesAndPlantationCrop **CO1**:
Plan for laying out of orchard
CO2:Identify problemsinraisingofMango, Banana,Sopota crops
CO3: Demonstratethemethodsofplantingandregulatingfloweringandfruitingincitrus,Guava, Papaya and pineapple, to select suitable training and pruning methods for Grape, Pomegranate and Ber.
CO4:DistinguishharvestingindicesforGinger,Turmeric,Pepperandcardamomfor monetaryreturns
CO5:DemonstrateProductionand processing ofplantationcrops.

LivestockandFishProduction Management

CO1:ExplainsroleoflivestockinIndianeconomyand statisticsoflivestockpopulation
CO2: Explains maintenance of farm records, their importance and utility
CO3: Differentiates digestive systems of ruminants, swine and poultry**CO4**:DescribesBroiler&Layermanagementalongwithdiseasepreventi on
CO5:Describesfishery resourcesinIndiaandthestatisticsof fisheryinIndia

AppliedStatistics

CO1: Explains the importance of concept of variability, measures spread or dispersion, understandsandidentityitscausetoprovideabasisforaction,describesimportanceof normal distribution in statistics
CO2:Interpretsmeaningofcorrelationco-efficientincontex,identificationoftwovariables, technology to find 'r'
CO3:Judgesappropriatemethodandidentifyproblemandapplytestviapvalue andCI
CO4:Judgesappropriatechi-square testforindependence andgoodnessof fit
CO5:Analyzestheresultsofdesignedexperimentinordertoconducttheappropriatestatistical analysis of data.

PrinciplesofFoodProcessingandPreservation

CO1:Definefoodprocessing andpreservation,Classifyfoodsforprocessing and preservation
CO2:Listoutmethodsoffoodpreservation
CO3: Explain processing methods of cereals, millets and legumes**CO4**:Explainprocessingmethodsoffruitsandvegetablesandoilsee ds **CO5**: Explain processing methods of spices and plantation crops

AgriculturalWaste Management

CO1:Describesimpactofagriculturalwasteonenvironment,kindsofwastesandroleofsoiland plants in waste management

CO2:Explainsimpactofagriculturalwasteonsoilqualityandplantqualityandsourcesofwaste from agriculture, agro industries and urban waste

CO3:Explainsutilizationofagriculturalwaste andin-situmanagementandcompostingtypes

CO4:Describes Influence ofAgriculturalwasteonwater,airandanimalresources

CO5:Suggests wastemanagement methodsand techniques

RuralAgriculturalWorkExperienceProgramme

CO1:Applythe knowledge ofthevariousagriculturaloperationsinvolvedinCropProduction

CO2:Applytheknowledge ofCropProtectiontechniquesinthehostfarmersfield

CO3:Surveyonsocioeconomic statusof farmersinthevillage

CO4:Organizemethoddemonstrationandagriculturalexhibitioninthevillages for benefitof farmers

CO5:Preparereport inprescribedformatincrop production,crop protection,Agrl.Economics, Ag. ExtensionandKVK activities

IndustryInternshipProgramme

CO1:Selecttheagro-industry basedontheinterestofthe students

CO2: Applyvarioustechniques and skillsinAgro-Industry

CO3: Formulateresearchproposal

CO4: Makeup of project report

CO5: Defend the research project

FarmingSystemsandSustainableAgriculture

CO1:Describe conceptsoffarmingsystems anditscomponents

CO2:Explainsconcepts,componentsandfactorsaffectingsustainable agriculture

CO3:Explainsenvironmentalpollutioninagroecosystem,excessuseoffertilizersandpesticides and control measures

CO4:Developmethodsand practices formanagingandconserving natural resources

CO5:ExplainandApplyknowledgeoforganicfarmingmethodsfor sustainable agriculture

AgriBusinessManagementandInternationalTrade **CO1**:
Explain structure of Agri-business management **CO2**:
Prepare Balance sheet in Agri business

CO3:Planfor financialmanagementinAgribusiness

CO4:Develop agro-based industries

CO5:Appraisetheroleofinternationaltradeinagri-business

EconomicEntomology

CO1: Illustratestheconceptsofmorphologyofsilkworms,Moriculture andabilitytoidentify, recognize and manage the pests and diseases of mulberry.

CO2:Applytheconceptsofsilkwormrearing,managementofsilkwormpestsanddiseasesandimparts knowledge on rearing equipment and appliances
CO3:Describestheconceptsofsilkwormmoulting,spinningandcocoonformationandpostcocoon technology.
CO4:Demonstrate theconceptsof honeybee rearingandinterprettheusesof byproducts
CO5:AnalyzetheprocessofLacculture itsusesand describestheimportanceofvermi-culture.

CommunicationandTransferofAgricultural Technologies
CO1:Recognize theimportance communicationintransferofagriculturaltechnologies.
CO2:Explaintheprocessofdiffusionandadoptionofinnovations.
CO3:Differentiatebetween anentrepreneurandamanager.
CO4:Applytheconceptsofgeneration,incubationandcommercializationofbusinessideasinthe development of entrepreneurship
CO5:Formulatetheprojectproposal forsetupindustry

PostHarvestTechnologyofFieldCrops
CO1: Explain different types of threshers
CO2: Explaindecorticators,shellers, crushersandginningof cotton
CO3: Use ofdifferentdryingmethods
CO4: Explainparboilingand millingof paddy
CO5:Design differentgrainstoragestructures

LivestockandFishProduction Management
CO1:Explainsroleoflivestockin Indianeconomyand statisticsoflivestockpopulation
CO2: Explains maintenance of farm records, their importance and utility
CO3: Differentiates digestive systems of ruminants, swine and poultry**CO4**:DescribesBroiler&Layermanagementalongwithdiseasepreventi on
CO5:Describesfishery resourcesinIndiaandthestatisticsof fisheryinIndia

FloricultureandLandscaping
CO1:Explain specialtechniques involvedinproductionofcommercialflowers
CO2:Select suitablepracticesforraisingGladiolus,carnation,Tuberose, Jasmine
CO3:Describevariousproductiontechniques inGerbera, Marigold,crossandra, Antirrhinum
CO4:Explain variousfeaturesofornamental Gardening.
CO5:Design variousGreenhouses forprotectedcultivation**.**

FundamentalsofHorticulture
CO1: Define various branches.
CO2:Distinguish methodsof Propagation.
CO3:Identify andexplainvariousvegetativepropagation Method
CO4:Distinguishanddifferentiategrowthregulatorsand effects
CO5:Classifyandcompareirrigationandfertilizerapplicationmethods,Explainvariousfeaturesof ornamental Gardening

B.Sc.ComputerScienceandEngineering

ProgramSpecificOutcomes:

Studentswillbeableto:

PSO1: Apply computer science programming languages and algorithms, as well as mathematical,physicsmodelsfordevelopingsolutionstotherealworldproblems.
PSO2: DemonstratethefundamentalsofComputerOrganization,OperatingSystems,Computer Programming and Networking related concepts of computer science and apply the knowledge in designing and building software solutions.
PSO3: Identify, formulateandanalyzecomputerprogramsintheareasrelatedtonetworking, web designing, cloud computing, and data mining of varying complexity.
PSO4: Abilitytocomprehendandwriteeffectiveproject reportsinmultidisciplinary environmentinthe contextof changing technologies

Physics
CO1:Apply Fundamentalelectromagneticconceptsforvariousapplicationsincludingwireless and optical communications.
CO2:Designdifferentapplicationsoflasersandfiberopticsinthefieldofindustry, medicaland telecommunications
CO3:Distinguishthevariouscrystallinematerialsandtounderstandthecrystallographic techniques
CO4:Applyconceptsofwaveandparticlenatureofmaterialparticlesforvariousengineering applications.
CO5:DevelopdifferentdeviceswithmoreefficiencyusingsuperconductingandNano materials.

Mathematics
CO1: Chooseappropriatedatastructurestorepresentdata itemsinrealworldproblems
CO2: Illustratenon-lineardatastructureslikelinkedlist
CO3: Organizethedatausingsortinginvariouslineardatastructuresanddeterminetime complexity.
CO4: Constructdatawithnon-lineardatastructure usingtrees.
CO5: Explaintheconceptofgraphs and B-trees

ElectronicDevicesand Circuits
CO1: Explainthevariousvoltagesacrossandcurrentflowthroughelectronicdevicesinvarious configurations, junction with varying doping concentrations
CO2: Designand constructamplifierandoscillatorcircuits anddifferentiatebetween them
CO3: Designand constructaDCpower supply
CO4: Analyzevariousfactorsinfluencing atransistor.
CO5: Analyzethecharacteristicsofamplifiers,timersand oscillators

ProblemSolvingandProgrammingin'C'
CO1: Explainthebasicintroductionof computerandprogramminglanguages

CO2: Categorizedifferentdata types,operatorsanddatainput/outputfunctionsin‘C’.
CO3: Develop programsusing‘C’controlstructures, arraysandstringconcept.
CO4: Subdivideslargerproblemsintosmaller onesusing‘C’functions.
CO5: Create programsusingtheconceptofstructures,unionandfilehandlingin‘C’.

MathematicsII

CO1: Categorizethevector-valuedfunctionsofarealvariableandtheircurves,Gradientvector fields and constructing potentials.
CO2: Analyzethedifferentialideasofdivergence,curl,andtheLaplacianalongwiththeir physicalinterpretations
CO3: UsetheapplicationsofGreen’stheoremintheplane,GaussdivergencetheoremandStake’s theorem.
CO4: Formulate thesolutionsetofasystemoflinear equations
CO5: Solvethecharacteristicpolynomial, eigenvectors, Eigenvalues.

LogicalandDigitalCircuits

CO1: Convertdifferenttypeofcodesandnumbersystemswhichareusedindigital communication and computer systems.
CO2: EmploythecodesandnumbersystemsconvertingcircuitsandComparedifferenttypesof logic families which are the basic unit of different types of logic gates in the domain of economy, performance and efficiency.
CO3:Analyzedifferenttypesofdigitalelectroniccircuitusingvariousmappingandlogicaltools and know the techniques to prepare the most simplified circuit using various mapping and mathematical methods.
CO4: Design different types of with and without memory element digital electronic circuits for particularoperation,withintherealmofeconomic,performance,efficiency,userfriendly and environmental constraints.
CO5: Assessthenomenclatureandtechnologyintheareaofmemorydevicesandapplythe memory devices in different types of digital circuits for real world application.

DataStructuresthrough‘C’

CO1: Chooseappropriatedatastructurestorepresentdata itemsinrealworldproblems
CO2: Illustratenon-lineardatastructureslikelinkedlist
CO3: Organizethedatausingsortinginvariouslineardatastructuresanddeterminetime complexity
CO4: Constructdatawithnonlinear datastructure usingtrees.
CO5: Explaintheconceptofgraphsandbtrees

ShellProgramming

CO1: Understand UnixOperatingsystem andtypesof shell
CO2: Applyfilerelatedand diskrelatedcommands
CO3: DemonstratetheuseofVIeditor
CO4: Interpretvarious Unix commands
CO5: Applyloopcontrolstructurestosolve problems

OperatingSystem

CO1: Explainfunctions,typesandstructuresofoperating system
CO2: Analyzevarious processmanagementconceptsincludingschedulingandsynchronization
CO3: Demonstrateprocesssynchronizationanddead locks
CO4: Solveissuesrelatedtofilesysteminterface
CO5: ChooseanappropriatePagereplacementalgorithm

ElectricalCircuitsandMachines

CO1: Studentwillbeabletoanalyzetheelectrical circuitswithhelpofKCLandKVL techniques.
CO2: Studentswillbeabletoexplaintheoperationof DCgeneratorandanalyzethe Characteristics of DC generator.
CO3: Student will be able to explain the principle of operation of DC motor and analyze their Characteristics.Acquiretheskillstoanalyzethestartingandspeedcontrolmethodsof DC motors.
CO4: Judgetodevelop equivalentcircuitand evaluateperformanceoftransformers.
CO5: Abilitytoidentifyspeed–torquecharacteristicsofinductionmotorandunderstand starting methods of induction motor.

ProgramminginC++

CO1: Describetheproceduralandobjectorientedparadigmwithconceptsofstreams,classes, functions, data and objects.
CO2: Understanddynamicmemorymanagementtechniquesusingpointers,constructors, destructors
CO3: Describetheconceptoffunctionoverloading,operatoroverloading,virtualfunctionsand polymorphism.
CO4: Classifyinheritancewiththeunderstandingofearlyandlatebinding,usageofexception handling, generic programming.
CO5: Demonstrate filehandlinginC++.

Discrete Mathematics

CO1: Develop understandingof LogicSetsandFunctions
CO2: Evaluateandapplythefundamentalconceptsingraphtheory
CO3: Developanunderstandingofhowgraphandtreeconceptsareusedtosolveproblemsarising in the computer science
CO4: ExpresstheconceptsandresultsofNumber Theory
CO5: Identify methodsandtechniquesused innumber theory

ProbabilityandStatistics

CO1:Employeetheprinciplesoflinearregressionandcorrelation,includingleastsquaremethod, predicting a particular value of Y for a given value of X and significance of the correlation coefficient.
CO2: Usediscreteandcontinuousprobabilitydistributions,includingrequirements,meanand variance, and making decisions.
CO3: Abletoperformand analyze hypothesestestsofmeans, proportionsandvariancesusing

bothone-andtwo-sampledata sets.

CO4:AbletoapplytheappropriateChi-Squaredtestforindependenceandgoodnessoffit. Candifferentiatebetweenthetetststatisticstobeusedfordependentandindependent samples

CO5: Understandtheconceptsofqualitycontrol,chanceandassignablecausesofvariation, control charts for variables.

ComputerOrganization

CO1: Demonstrate knowledgeofregisterorganizationofabasiccomputer system

CO2: Explainmachine languageofabasiccomputer system.

CO3: Appraisein-depthunderstandingofcontrolunitorganizationandmicroprogrammed control.

CO4: Applyvariousalgorithmstoperformarithmeticoperationsandproposesuitablehardware for them

CO5: Analyzeandemphasizevariouscommunicationmediainthebasiccomputersystemusing design of various memory structures

DatabaseManagementSystems

CO1: Represent logicaldatabaseusingEntityRelationshipandEnhanced ERmodel.

CO2: Formulatedatabaseusingrelationalalgebra andorganizerelation usingnormalization

CO3: DesignSQLqueries andimplementsPL/SQL.

CO4: Classifythestorageandfilestructure,storageaccess,indexingandhashingtechniquesof the database

CO5: ExplaintheconceptofTransactions,recoverysystemandconcurrencycontrol.

Java Programming

CO1: Understand fundamentalsofobjectoriented concepts,classes,objects and methods

CO2: Applyinheritance,packages andexceptionalhandlingtechniques

CO3: DemonstrateThreadsandappletprogramming.

CO4: Expresseventhandlingandswingcomponents.

CO5: Design interactive programs using swing

MicroprocessorSystemsandApplications

CO1: ToUnderstandtheArchitectureof16-bitMicroprocessor8086alongwithdifferentmodes of operation

CO2: Applyknowledgeanddemonstrateprogrammingproficiencyusingthevariousaddressing modes and data transfer instructions of the 8086t microprocessor

CO3: Analyzedifferentassemblylanguageprograms

CO4: IdentifythecircuitrytotheMicroprocessorI/Oportsinordertointerfacetheprocessorto external devices

CO5: Tocombinethedifferentinterfacingcomponentsofthemicroprocessortoformacomputing Machine.

ObjectOrientedSystemsDevelopment

CO1: Explain basics of OOSD concepts

CO2: CategorizeObject orientedmethodologies and UMLdiagrams.

CO3: Chooseclassification theoryandperformingcase studies.

CO4: Design models based on Object oriented concept.
CO5: Identify software equality, system usability, measuring and satisfaction

Software Testing and Quality

CO1: Express importance of testing in software development process, glass-box testing, black- box testing, and how to report and analyze bugs
CO2: Design different types of test case.
CO3: Organize how to build testing strategy, establishing software testing methodology and software testing techniques.
CO4: Identify the definition of quality, metrics for software quality and inspection techniques
CO5: Explain software configuration management, software reengineering and software restructuring techniques

Software Engineering

CO1: Design software through various process models.
CO2: Analyze Object Oriented concepts and various Models
CO3: Choose different designs and architectures.
CO4: Explain components, golden rules and design evaluation.
CO5: Select testing techniques and determine its quality.

Operation Research

CO1: Identify the various techniques of operations research and to translate a real–world Problem, given in words, into a mathematical formulation.
CO2: Construct the simplex table and to plan the optimum results.
CO3: Use the program for optimizing the cost involved in transportation problems
CO4: Develop and solve transformation models and assignment models
CO5: Design the sequence of jobs and to make up the total process time

Mobile Application and Development

CO1: Compare different mobile application models/architectures and patterns
CO2: Apply a mobile development framework to the development of a mobile application.
CO3: Explain components and structure of a mobile development framework.
CO4: Develop advanced Java programming competency by developing a maintainable and efficient Record Management System.
CO5: Develop Mobile Application using HTTP

Web Technologies

CO1: Illustrate basic html scripts to design web pages
CO2: Explain about cascading style sheets
CO3: Analyze javascript programming using operators, expressions, functions
CO4: Classify event handling in javascript and introduction to xml
CO5: Develop PHP programs and database connectivity through MySQL

Computer Networks

CO1: Identify basic computer network topologies and protocols and explain Data Communication

Systemcomponents

CO2: Classifydifferenterrordetecting techniques.

CO3: Constructsub-nettingandroutingmechanisms.

CO4: SketchtheroutingprotocolsandanalyzehowtoassigntheIP addressesforthegiven network

CO5: Develop networkdesign and implementation

AdvancedJava

CO1: Understandanddevelop conceptsofdatastructuresusingJava library.

CO2: Developcomponent-basedJavasoftwareusingJavaBeansandcreatewell-formedXML document.

CO3: Develop client/serverapplicationsusingServletsandJSP.

CO4: Update andretrievethedatafrom thedatabases usingSQL

CO5: Identify thetypeofsocket usedforconnectionand implementTCP/IPsocketprogramming

E-Commerce

CO1:Explain ecommercebasicsandregulatory environment

CO2: IdentifyEDIandrisksassociated,maintainedandrecoveryplans. **CO3:** Classify security, cryptography and messaging protocols briefly **CO4:** Use Firewalls, Intelligent Agents and EPS.

CO5: Applyretailingand advertisingtechniquesand B2Bbusiness.

PrinciplesofInformation Security

CO1: Explainconceptsofconfidentiality,availabilityandintegrity(CIA)incontextof Information security

CO2: Identify therisk,assessand riskcontrolstrategies.

CO3: Demonstrateexpertiseinconfiguringhostandnetworkleveltechnicalsecuritycontrolsto include host firewalls, user access controls, host logging, network filtering, intrusion detection and prevention

CO4: Analyzesystems,tools,methods,andtechniquesforsecuringdigitalinformationwithinan organization

CO5: Developencryption anddecryption techniques

CloudComputing

CO1: Understandbasicadvantages anddisadvantagesofcloud computing

CO2: Classifydesignandarchitectureofcloudcomputing,typesofcloudsandservicesofcloud computing

CO3: Explaincloudcomputingtechnologyandexamples

CO4: Analyzevirtualizationandvirtualization techniques

CO5: Applyofmarketoriented cloudcomputingandthirdpartyservices

Data Mining

CO1: Demonstrate anunderstandingoftheimportance of dataminginganditsrelatedareas.

CO2: Organize andprepare thedataneededfor data miningusingprepreprocessingtechniques

CO3: Perform exploratory analysis of the data to be used for mining.
CO4: Implement the appropriate data mining methods like classification, clustering or Frequent Pattern mining on large data sets.
CO5: Define and apply metrics to measure the performance of various data mining algorithms.
CO6: Analyze the problem domain, use the data collected in enterprise apply the appropriate data mining technique, interpret it.

Python Programming
CO1: Demonstrate basic programming techniques.
CO2: Apply concepts of functions, sequences, dictionaries
CO3: Appraise how to implement modules, files, exceptions
CO4: Create object oriented programming
CO5: Explain GUI programming, database and network programming

B.Sc. Computer Systems and Engineering

Programme Specific Outcomes

Students will be able to:

PSO1: Ability to apply the knowledge of computer system and design principles in building the software and hardware components.
PSO2: Ability to apply knowledge of layered network models, protocols, technologies and topologies as well as incorporating security policies for building network and internet based applications.
PSO3: Apply the theoretical foundations of computer science in modeling and developing solutions to the complex and real world problems as well as designing and developing the application software systems along with the database design and management that meet the automation needs of industry and society.
PSO4: Demonstrate proficiency in hardware and software installation and configuration
PSO5: Examine the elements supporting data communications and systems and Show how the various IT components interact to support the Network Communications Management field

Electronic Devices and Circuits
CO1: Define and classify the various electronic components
CO2: Explain the functioning of electronic devices
CO3: Construct and understand the functioning of BJT
CO4: Apply the behaviour of transistor in building amplifier
CO5: Explain the operation of amplifiers and oscillators

Problem Solving and Programming in C

CO1: Explainthebasicintroductionof computerandprogramminglanguages.
CO2: Categorizedifferentdata types,operatorsanddatainput/outputfunctionsin‘C’.
CO3: Develop programs using‘C’controlstructures, arrays andstring concept.
CO4: Subdivideslargerproblemsintosmaller onesusing‘C’ functions.
CO5: Create programsusingtheconceptofstructures,unionandfilehandlingin‘C’.

EngineeringDrawingandEngineering Workshop
CO1: Explaintheconceptofdrawinginstrumentsandrepresentthelinesusedinthe drawing
CO2: Preparethe differenttypesofconstruction byselectingthetypeof construction
CO3: Differentiatedrawingfromeachother,identifytheproblem,andselecttheproperportion of the points, lines to solve the problem
CO4: Applytheknowledgeofcryptographicchecksumsandevaluatetheperformanceofdifferent message digest algorithms for verifying the integrity of varying message sizes
CO5: Create theviewbylookingat thedrawingliketop,frontandsideview

LogicandDigital Circuits
CO1: Explain the binary logic and switching circuits
CO2: Solve Boolean algebra and Boolean functions
CO3: DesignBooleanfunctionsusinguniversalgates
CO4: Constructthearithmeticcircuitsanddigital comparators
CO5: Constructandanalyzethevariouscombinationalcircuits

C++andDataStructures
CO1: Differentiatebetweenobject-orientedprogrammingandprocedure-orientedprogramming.
CO2: Develop programs usingobjectoriented programming features.
CO3: Organizethedatausingsortingandvariouslineardatastructuresanddeterminethetime complexity
CO4: Illustratenon-lineardatastructures liketrees, graph
CO5: Chooseappropriatedatastructurestorepresentdata itemsinrealworldproblems

PCHardwareandSoftware Installation
CO1: Identifythebasiccomponentsof computers
CO2: Differentiatebetweeninternalandexternalconnectors
CO3: Analyze different types of processors in market**CO4:**
Choose RAM and Hard disk drives for a computer **CO5:**
Develop skill to Assembly and Disassembly a system

ITHardwareand Networking
CO1: IdentifyMotherboard anditscomponents.
CO2: Analyze theworkingofvariousinputandoutputdevices
CO3: Explaintheworking ofvariousstorage devices
CO4: ExplainAssemblingandrepairingofDesktop Computerwithallitshardware components.
CO5: Identify differenttypesofnetworking devices

DigitalSystem Design

CO1: Explainthefunctioningof sequentialcircuits
CO2: Applytheflipflopsinconstructingthecountersandregisters
CO3: Explainthearithmetic andlogicmicrooperations
CO4: Designthearithmeticunitandlogic unit
CO5: ConstructandanalyzetheALU

Java Programming

CO1: Differentiatebetweenobject-orientedprogrammingandprocedure-orientedprogramming
CO2: Applyobject-orientedprogrammingfeatures forsolvingagivenproblem.
CO3: Selectanappropriateexceptionhandlingdependingonapplication.
CO4: Designfile operationsusingjavastandardlibrary
CO5: Develop interactiveprograms usingappletand swing

ProbabilityandStatistics

CO1: Determinetherelationbetweenanytwofactorsusingtheconceptsofcorrelationand regression and calculate the mean and variance for the random events.
CO2: Applythedistributionsbothdiscreteandcontinuousfortheproblemsindifferentfieldsand learn the importance of normal distribution and its applications in real life.
CO3: Differentiatebetweendifferentsamplingtechniquestobeusedindifferentsituationsand draw the inference based on the sample for a population when the sample size is large.
CO4: Comparenetworking services
CO5: Planinstallationof required services inorganization

Server Administration

CO1: Choosedifferenteditionsofoperating system
CO2: Organizetopologiesinactive directory
CO3: Comparedifferentservicesinactive directory
CO4: Comparenetworking services
CO5: Planinstallationofrequiredservices inorganization

ComputerOrganization

CO1: Demonstrateknowledge ofregisterorganizationofabasic computer system
CO2: Explainmachine languageofa basiccomputer system.
CO3: Appraisein-depthunderstandingofcontrolunitorganizationandmicroprogrammed control.
CO4: Applyvariousalgorithmstoperformarithmeticoperationsandproposesuitablehardware for them.
CO5: Analyzeandemphasizevariouscommunicationmediainthebasiccomputersystemusing design of various memory structures

OperatingSystems

CO1: Explainfunctions,typesand structuresofoperatingsystem
CO2: Analyzevarious processmanagementconceptsincludingschedulingandsynchronization

CO3: Illustratethe conceptsofmemorymanagementandI/O system.
CO4: Solveissuesrelatedtofilesysteminterface.
CO5: ChooseanappropriatePagereplacementalgorithm

MicroprocessorsandApplications
CO1: Explainthearchitectureof 8086basedmicrocomputer
CO2: Develop theassemblylanguage programs for8086based microcomputer
CO3: Develop theinterfacingcircuits for8086based microcomputer
CO4: Explain8086based microcomputerinterruptmechanism
CO5: Use 8086basedmicrocomputer toexplainserialcommunication

ElectricalCircuitsandMachines
CO1: AnalyzetheelectricalcircuitswithhelpofKCLand KVL techniques.
CO2: ExplaintheoperationofDCgeneratorANDDCmotorandanalyzethe Characteristics of DC generator and DC Motor
CO3: Analyze thestartingand speedcontrolmethodsof DCmotors.
CO4: Understand todevelopequivalent circuitand evaluateperformanceoftransformers
CO5: Understand theoperationofvarious specialmachines.

SoftwareTestingandQuality
CO1: Expressimportanceoftestinginsoftwaredevelopmentprocess,glass-boxtesting,black- box testing, and how to report and analyze bugs
CO2: Designdifferent typesoftestcase
CO3: Organizehowtobuildtestingstrategy,establishingsoftwaretestingmethodologyand software testing techniques.
CO4: Identify thedefinitionofquality,metricsforsoftwarequalityandinspection techniques.
CO5: Explainsoftwareconfigurationmanagement,softwarereengineeringandsoftware restructuring techniques.

SoftwareEngineering
CO1: Design software through various process models**CO2:**AnalyzeObjectOrientedconceptsandvariousMo dels **CO3:** Choose different designs and architectures
CO4: Explaincomponents,golden rulesanddesignevaluation
CO5: Selecttestingtechniquesanddetermineitsquality

EthicalHacking
CO1: Explainessentialterminology and phasesof hacking
CO2: Analyzehowtoperformreconnaissanceinvariousorganizations
CO3: Identify differenttypesofscanning methods
CO4: Explainthemaintenanceofaccessgained throughhacking
CO5: Designtechniquesusedtoavoidthetracesofattacksinordertoescapefromthelegal Punishment by a malicious hacker.

WebSecurity

CO1: UnderstandArchitecture oftheWorldWideWebandencryption
CO2: Understand SSLandTLS
CO3: Explaindigital certificateswithPGP
CO4: Explaincookies andWebbugs, privacy protectingtechniques
CO5: Explainhowtosecureyourweb service,protecting yourDNS

PrinciplesofInformation Security

CO1: Explainconceptsofconfidentiality,availabilityandintegrity(CIA)incontextof Information security
CO2: Identify therisk,assessand riskcontrolstrategies.
CO3: Demonstrateexpertiseinconfiguringhostandnetworkleveltechnicalsecuritycontrolsto include host firewalls, user access controls, host logging, network filtering, intrusion detection and prevention
CO4: Analyzesystems,tools,methods,andtechniquesforsecuringdigitalinformationwithinan organization
CO5: Developencryption anddecryption techniques.

DatabaseManagementSystems

CO1: Represent logicaldatabaseusingEntityRelationshipandEnhanced ERmodel.
CO2: Formulatedatabaseusingrelationalalgebra andorganizerelation usingnormalization.
CO3: DesignSQLqueries andimplementsPL/SQL.
CO4: Classifythestorageandfilestructure,storageaccess,indexingandhashingtechniquesof the database.
CO5: ExplaintheconceptofTransactions, recoverysystem andconcurrencycontrol.

AdvancedServer Administration

CO1: Distinguish and describe the windows server 2012
CO2:Explaindirectoryservicesandconfigure DHCPsever
CO3: Identify the prerequisites to install DNS
service**CO4**:Tell about file services and do install WDS
CO5:Originate therequiredservices

ComputerNetworks

CO1:Identifybasiccomputernetworktopologiesandprotocolsandexplain Data Communication System components
CO2:Classifydifferenterrordetecting techniques.
CO3:Constructsub-nettingandroutingmechanisms.
CO4:SketchtheroutingprotocolsandanalyzehowtoassigntheIP addressesforthegiven network
CO5:Develop network designandimplementation

Internetof Things

CO1: Identify the importance of IOT and its applications
CO2:DifferentiatebetweenIOTandM2M,SDNandNFV
CO3: Apply logical design using python

CO4:UnderstandbuildingofIOT devices andRaspberry PI
CO5:ExplaintheworkingofWAMPserverandAWS

CryptographyandNetwork Security
CO1:Identifyinformationsecuritygoals,classicalencryptiontechniquesandacquirefundamental knowledge on the concepts of finite fields and number theory.
CO2:ApplyPublicKey CryptographicTechniqueforsecuringmessages
CO3:Useanappropriatemessageauthenticationcode.
CO4:Comparetheperformanceofdifferentmessagedigestalgorithmsforverifyingtheintegrity of varying message sizes
CO5:ComparedifferentIEEE standardsandelectronicmail security

LinuxAdministration
CO1:DescribetheInstallationofLinux and User,Group Administration,ACL
CO2:Explain theconfiguration NFS,FTPand Sendmailserver
CO3:Explain theconfiguration DHCPandSElinux
CO4:Explain theconfiguration SAMBAand DNSserver
CO5:Explain theconfigurationApacheserver,diskquotas

BScBiotechnology

ProgrammeSpecificOutcomes

Studentswillbeableto:

PSO1: Understand thenatureandbasicconceptsofBiotechnology,Genetics,andChemistryand apply knowledge to identify, analyze and understand concepts to solve problems related to field of Biotechnology and engineering
PSO2: Designtoperformexperimentsandinterpretdataforinvestigatingcomplexproblemsand to develop solution to Biotechnology problems by applying appropriate tools while keeping in mind safety factor for environmental & society
PSO3: Developoralandwrittencommunicationskillstojustifysocietal,health,safetyandlegal issues and understand his responsibilities in biotechnological practices

BiochemistryandMetabolism
CO1:Understandcarbohydrates anditscomplexbiochemicalpathwayswithinliving cells
CO2: Classify types of lipids and explain their role in biological systems
CO3:Explainphysicalandchemicalpropertiesofaminoacidsandproteins **CO4**:
Understand the structure of DNA and RNA
CO5:Identifychemicalnatureofenzymesand Vitamins

CellBiology&Molecular Genetics

CO1:Understandcytological,biochemical,physiologicalandgeneticaspectsofcell.
CO2:Illustrateabouttheorganizationalandfunctionalaspectsofdifferenttypesofcell organelles.
CO3:Explain structureand functionsofdifferenttypesofcellorganelles.
CO4:UnderstandthemechanismofDNAReplication,Denaturation&Reassociation kinetics
CO5:UnderstandfundamentalsofDNAdamageandrepair,includingtypesofmutationand repair mechanisms

GeneticAnalysis
CO1:Understandgeneticsanditsfundamentalsoforiginandhistory
CO2:Understanddifferenttypesofmendelian geneinteractions
CO3:Illustratedifferenttypessexdeterminationmechanismsin organisms
CO4:UnderstandnonMendeliangeneinteractions
CO5:Understandthemechanismsoftransferofgeneticinformationatprokaryotic level

Chemistry–I
CO1: Analysetheenergychangesinagivenphysicalorchemicalprocess**. CO2**:
Apply the concept of feasibility of a process.
CO3:Comparetheelectricalconductivities ofvariousconductors.
CO4:Evaluatecell potential,comparevarious electrodes.
CO5: Explainvariousphasesinaheterogeneoussystem,applytheconcepttoseparatevarious Phases**.**

Immunology
CO1: Understand conceptsofnonspecific, specificimmunity,organs ofimmunesystem.
CO2:Identifythestructure,function,andcharacteristicsofimmunoglobulins,Statetheprinciple of the routine serologic procedures performed in the laboratory.
CO3:UnderstandantibodydiversityMAProduction&applications
CO4:Illustratetherelevance ofVaccines&immunitytoinfection anddisease.
CO5: Understandinflammation,allergicreactions &autoimmunity

BiotechnologyandHuman Welfare
CO1:ExplaintheProductionofindustriallyimportantproducts
CO2:Identify thetechniquesofgeneticengineeringfor productionoftransformedplants
CO3:Develop biodegradablebiopolymers
CO4:Understandthebasicconceptsofforensic science
CO5: Applytheconcepts ofbiotechnologyin medicine

MicrobialBiotechnology
CO1:Categorize majorgroupsof microorganisms
CO2:Chooseappropriate methodsforcontrolofthegrowthofmicroorganisms
CO3:Identify andculture the bacteria
CO4:Explaintheconcepts ofMicrobialmetabolism
CO5: Applytheprinciples ofFermentationforproductionofcommerciallyimportantproducts

Chemistry-II

CO1: Analysethestructures ofvarious molecules/ionsbased onLCAO concept.
CO2:Explainthesynthesisandstructuresofcompoundsof P-Blockelements.
CO3:Explainthesynthesisandstructuresofcompoundsof P-Blockelements.
CO4: Explain the fundamentals of organic molecules.
CO5: Explaintheorganic reactionmechanisms

Bio-AnalyticalTechniques

CO1:Explaintheoperatingconditionsforthevariousseparationtechniques.
CO2:Separate biomoleculesusingElectrophoretic techniques
CO3:Analyzetheworkingprinciplesofanalytical instruments
CO4:Understandtheapplicationofradioactivityintheanalysisof biomolecules
CO5: Applytheconceptsofnanotechnologyin medicine

RecombinantDNA Technology

CO1: Explain basic and advanced Concepts of rDNA technology**CO2**:Understandthecloningstrategiesandscreeningofrecomb inants. **CO3**: Analyze methodology of PCR and sequencing
CO4:Select appropriatevectorusedfor cloning
CO5: ApplyrDNATechnology principlesforPharmaceutical applications.

MolecularBiology

CO1:Explainthefinestructureanalysisof gene
CO2:Illustratethestructureof proteins
CO3:Analysethemechanisms ofcentraldogmainprokaryotesand eukaryotes
CO4:Explain themolecularmechanismsofgene regulation
CO5: Identify thestructureoftransposable elements

Chemistry-III

CO1: Explainsynthesisandpropertiesofalcohols,phenolsandethers.
CO2:Comparesynthesisandproperties ofaldehydes andketones.
CO3:Explainsynthesisand properties ofcarboxylicacids,illustrateapplicationsofcarbanions.
CO4:Analyse thethree dimensionalviewofaorganicmolecule,opticalisomerism.
CO5: Explainthepropertiesof d-andf-blockelements

PlantBiotechnology

CO1:UnderstandbasicConceptsofplanttissueculture techniques
CO2:Identifythetechniquesofplanttissueculturefor cropimprovement
CO3:Producesomatichybridsand artificialseeds
CO4:Explainthelargescaleculture ofplantcellsforproductionofsecondarymetabolites
CO5: Applythetechnologyofplant transformation

HumanGenetics

CO1:Understanddifferenttypesofinheritancepatterns with example
CO2:Applythe basicknowledgetounderstandhaemoglobinand itsvariantsanddisorders
CO3:Understandthebiologyof cancer

CO4:Applythebasicknowledgetounderstandthegenetherapyfor inheriteddiseases
CO5: Understand onprenataldiagnosisandgenetic counselling.

Biostatistics
CO1:Understanddefinitionandimportanceofbiostatisticsindifferent areas
CO2:Illustrateaboutthegraphicalrepresentationofdata
CO3: Recognize about measures of central tendency
CO4: Understand measures of dispersion.
CO5: Understand thetechniques of sampling

Stemcell Biology
CO1:Classifytypesof stemcells
CO2:Understandtheprocessofisolation,culturing andidentificationofEmbryonicstemcells
CO3:Identify Adultstemcells
CO4:Applytheprinciplesofgenetic engineeringtomodifyStemcells
CO5: Applytheconceptof TissueEngineeringinproductionof complete organ

Biodiversity
CO1:Understandbiodiversityand itsimportanceatglobal&nationallevels.
CO2:Understandvaluesofbiodiversityand microbialtaxonomyandtoxins
CO3:Illustratedifferenttypesofdiversityandrelatetheirwaystoconservewild life
CO4:Understandextinctthreatenedandendangeredspecies,biodiversityHotspots&their protection
CO5: Understandimportanceofbiodiversity conservation

Chemistry-IV
CO1: Evaluate theconceptofcriticalphenomenon,realgas.
CO2:Applytheconceptofcolligativepropertyanddeterminemolarmassofunknown compound**.**
CO3:Analysethestructures ofvariouscomplexes
CO4:Comparethearomaticityandsynthesisofheterocyclic compounds
CO5: Explainsynthesisandstructures ofcarbohydrates andaminoacids.

Bioprocess&FermentationTechnology
CO1: Explainfermentordesign&typesof fermentor
CO2:Understandconceptsonscreening, strainimprovement,batch&continuousfermentation
CO3:Analyse&controlofdifferentbioprocessparameters
CO4:Understandconceptsofdownstream process
CO5: Explainproductionofdifferentfermentedproducts

MedicalBiotechnology
CO1: Understand conceptsonvaccines,differenttypesof vaccines andtheir production
CO2:Evaluatedifferent markers andmethodsusedfordiagnosing diseases

CO3:Illustratedifferenttherapeuticagents andrelatethemfortreating disease
CO4:Understandadvancedtechniques&strategiesusedintreating disease
CO5: Understand Bloodclottingfactorsdrug discovery,designing, properties& delivery.

MicrobialPhysiology
CO1: Identifyhistoricalperspectivesin Microbiology
CO2:Understands the structureof Prokaryotes
CO3:Identify theGrowth phasesof bacteria
CO4:Explaintheconcepts oftransportofnutrients
CO5:AnalyzethemethodsofPreservationandMaintenanceofMicrobialCultures

EnvironmentalBiotechnology
CO1: Understand conceptsofFood chin,ecologicalpyramids,globalwarmingandecosystem
CO2:Understandxenobiotic,effluents,typesofrecalcitrants&differentmethodsofwaste water treatment
CO3:UnderstandconceptsofBiodegradation,Biodegradtivepathways& Bioremediation
CO4:Explain aboutBioleaching,renewable, onrenewableresources&Biosensors.
CO5: ExplainaboutBiofuelproduction&role ofcellulose inbiofuelproduction.

EvolutionaryBiology
CO1:Identifythehistoricalreviewofevolution
CO2:Understandstheconceptsoforiginofcell
CO3: Classify the types of fossils
CO4:Explaintheconceptsofnaturalselection
CO5:Explaintheroleof extinctioninevolution

IPR,Bioethics&Biosafety
CO1:Understandbasicissuesofbiosafetyfor humanhealthandenvironment
CO2:Explain necessityofBioethics andcauses ofunethicalacts
CO3:Identify typesofIPR
CO4:Analyze differentaspectsincarryingoutresearch
CO5: Explainthetheories ofEntrepreneurship

AnimalBiotechnology
CO1:Explainbasicsconceptsofanimalcellculture
CO2:Classifythetypesofanimalcellculture media
CO3:Design bioreactorssuitablefor largescaleculture ofanimalcells
CO4:Applythe principlesofgeneticengineeringtotransfectanimalcellsforindustrialuse
CO5: Applytheconceptsoftransgenic animal

Chemistry-V
CO1: Analysevariousnuclearprocessesand applicationsofradio isotopes.
CO2:Explain fundamentalconceptsofspectroscopictechniques.

CO3:Comparesynthesisandproperties ofnitrogencompounds
CO4:Evaluatephotoprocessesand comparevariousorganometallic compounds
CO5: Evaluateorderandmolecularity ofareactionand catalytic processes.

EnzymeTechnology
CO1:Understandtheprinciplesofenzyme technology
CO2:Explain procedureforproductionandpurificationofCrude enzymes
CO3:Demonstrate the methodsof immobilization
CO4:Design immobilizedenzymereactors
CO5: Identify theapplicationsofbiosensor inhealthcareandenvironment

IndustrialFermentations
CO1:Develop industrialfermentation process
CO2:Understandtheproductionofmicrobialmetabolites
CO3:Analyzetheproductionprocessesofsecondarymetabolites
CO4:Explaintheproductionofindustrialenzymes
CO5:Explain themethodsofProductionofbiotechnologyproducts

FundamentalsofGenomics andProteomics
CO1:Understandthegenomeanditsdiversifications
CO2:Applythe basicknowledgetounderstandgenome sequencingmethods
CO3:Explain principlesandsoftware'sanddatabasesforgenome analysis
CO4:Evaluateand analyzemethodsforsecondary structureandnatures of proteins
CO5:Characterizationofproteinsbydifferentadvancedtechniques

EcologyandEnvironmentManagement
CO1:Understandtheconceptsof ecologyandecosystem.
CO2:Explainbasicconceptsofhydrosphere,FreshwaterAquaticandMarineecosystem.
CO3:Understandtheconceptsofbiogeochemicalcyclesand Energytransferinecosystem
CO4: Explain different types of wastes and waste management
CO5:Understand theconceptsofEnvironmentalcleanupandroleofbiotechnologyin protection and preservation of environment

Bioinformatics
CO1:Explain INSDC&different typesofformat.
CO2:Understanddifferenttypesofdatabasesavailableandscoringmatrixsignificance in alignment of sequenc**es**
CO3:Explainprinciplesandalgorithmsofpairwiseandmultiplealignments,andsequence similarity searching
CO4:Evaluateandanalysemethodsforsecondarystructurepredictionandphylogenetictree construction
CO5: Understandonmodelingofunknownproteinstructurebyusingtemplateandapplication of bioinformatics in various fields

Dept.ofMaths,Statistics&ComputerScience

DescriptiveStatistics&ProbabilityDistribution-I

CO1:Organize,manageandpresentdataandAnalyzestatisticaldatausingmeasuresof central tendency

CO2:Analyzethestatisticaldatausingdispersion andlocation.

CO3:Usethebasicprobabilityrules,includingadditiveandmultiplicativelaws,usingthe terms, independent and mutually exclusive events.

CO4:Developthe probabilitydensityfunctionoftransformationofrandomvariables.

CO5:Identifyprobabilities,andderivethemarginalandconditionaldistributionsof bivariate random variables.

DescriptiveStatistics&ProbabilityDistributions-II

CO1:Usediscreteandcontinuousprobabilitydistributions,includingrequirements,mean and variance, and making decisions

CO2:Identifythecharacteristicsofdifferent discretedistributions.

CO3:Applythenormalprobabilitydistributionincludingstandardnormalcurvecalculations of appropriate areas.

CO4: Chooseexponential,betaandGammadistributionstosolvestatisticalproblems.

CO5:Developdifferent distributionstosolvevariousstatisticalproblems.

StatisticalMethodsandInference-I

CO1:Interpretthecorrelationbetween two variables.

CO2:Distinguishtheprinciplesoflinearregressionandcorrelation,includingleastsquare method, predicting a particular value of Y for a given value of X and significance of the correlation coefficient.

CO3:Showtheassociationbetweenthe attributes.

CO4:Generalizetheproperties of estimators.

CO5:Differentiate Maximumlikelyhoodestimationandmethodof moments

StatisticalInference-II

CO1:Developthedistributionalresultsneededforstatisticalinference.

CO2:Analyzehypothesestestsofmeans,proportionsandvariancesusingbothone-andtwo- sample data sets.

CO3:Explain Chi-Squaredtestforindependenceofattributesandgoodnessoffit.

CO4:Differentiatebetweenthetestsstatisticstobeusedfordependentandindependent samples.

CO5:Designthetest statistictobe used whenthenatureofthedistributionis unknown.

AppliedStatistics-I

CO1:Classifytheanalysisofvarianceofone-wayandtwo-wayclassifications.

CO2: Design experiments, carry them out, and analyze the data they yield

CO3: Tell the difference between CSO and NSSO.

CO4:Demonstrateunderstandingoftheconceptsoftimeseriesanditsapplicationsin different areas.

CO5:Differentiatevariousmeasures ofsecular trendand seasonal indices

AppliedStatistics–II

CO1:Analyzetheconceptsofqualitycontrol,chanceandassignablecausesofvariation, control charts for variables and attributes.
CO2: Classify tolerance limits, specification limits and process capability limits.
CO3:Selectthe appropriate index numbers and calculate an indices from given data
CO4:Constructthecostoflivingindexnumbersandwholesalepriceindexnumbers.
CO5:Developtheknowledgeonvitalstatistics,and calculatefertilityrates fromgivendata

OperationsResearch
CO1:Identifythevarioustechniquesofoperationsresearchandtotranslateareal–world problem, given in words, into a mathematical formulation.
CO2:Constructthesimplextableandtoplantheoptimumresults.
CO3:Use theprogramforoptimizingthecostinvolvedintransportationproblems
CO4:Developandsolvetransformationmodelsand assignmentmodels
CO5:Designthesequence ofjobs andto makeupthetotalprocess time

DesignofSampling Surveys
CO1:Analyzethepractical issuesarisinginsamplingstudies.
CO2:Explaintheconceptsofsimplerandomsamplingwithandwithoutreplacement.
CO3:Distinguishbetween simplerandom samplingandstratifiedrandom sampling.
CO4:Comparesimplerandomsampling,stratifiedrandomsamplingandsystematic sampling.
CO5:Choosetheequilibriumpriceandquantityfromatableofpricesandtherelated quantity supplied and quantity demanded

AdvancedOperationsResearch
CO1:Analyzevarious queuingmodelsandobtainthe leastwaitingtime.
CO2:construct thenetworkmodelsanddetermine thestartandfinishtime.
CO3:Designnewsimplemodels,likeCPM,PERTtoimprovedecision–makingand develop critical thinking and objective analysis of decision problems.
CO4:Identifythesaddle pointfor gameswithmixedstrategies.
CO5:Constructthedifferentmodelsinvolvedingame theory.

AbstractAlgebra
CO1:Demonstrateimportantmathematicalconceptsinabstractalgebrasuchasdefinitionof a group, order of a finite group and order of an element.
CO2:**Analyze**differenttypesofsubgroupssuchasnormalsubgroups,cyclicsubgroupsand understand the structure and characteristics of these subgroups
CO3:**Solve**thealgebraic problemsusingappropriate techniques.
CO4:**Analyze**theknowledgeandunderstandingoffundamentalconceptsincludinggroups, subgroups, normal subgroups, homomorphism and isomorphism.
CO5:Demonstrateknowledgeandunderstandingofrings, fieldsandtheir properties.

DifferentialCalculusAndDifferentialEquations:
CO1: Classify the differential equations with respect to their order and linearity.Solve differentialequationsoffirstorderusingnumericalandanalyticalmethodssuchas

IntegratingFactors.

CO2:**Analyze**andSolvebasicapplicationproblemsdescribedbyfirstorderdifferential equations. Such as orthogonal trajectories

CO3:**Solve**secondorderHomogeneousEquationswithConstantCoefficients.Obtainexact and numerical solutions using differential equations technology.

CO4:**Construct**thevector-valuedfunctionsofarealvariableandtheircurves,Gradient vector fields and constructing potentials.

Co5:Identifythedifferentialideasofdivergence,curl,andtheLaplacianalongwiththeir physicalinterpretations.

Discrete Mathematics

CO1:Developunderstanding ofLogicSetsandFunctions

CO2:**Understand**BooleanalgebraandbasicpropertiesofBooleanalgebra;abletosimplify simple Boolean functions by using the basic Boolean properties.

CO3:**Develop**anunderstandingofhowgraphandtreeconceptsareusedtosolveproblems arising in the computer science

CO4:**Evaluate**andapplythefundamentalconceptsingraphtheory

CO5:Applygraphtheorybasedtoolsinsolvingpracticalproblems.

ElementaryNumberTheory

CO1:ExpresstheconceptsandresultsofNumber Theory.

CO2:**Demonstrate**knowledgeandunderstandingoftopicsincluding,divisibility,prime numbers, congruences,Diophantine equations.

CO3:**Identify**methodsandtechniquesused innumber theory.

CO4:**Solve**challengingproblemsinNumber Theory.

CO5:Developadeeper conceptualunderstandingofthetheoreticalbasisof number theory andcryptography.

FunctionsofComplex Variables

CO1: Represent complex numbers algebraically and geometrically, define and analyze limitsandcontinuityforcomplexfunctionsaswellasconsequencesofcontinuity.

CO2:**Apply** the concept and consequences of analyticity and the Cauchy-Riemann equationsandofresultsonharmonicandentirefunctionsincludingthefundamental theorem of algebra.

CO3:**Analyze**sequencesand seriesofanalytic functionsandtypesof convergence.

CO4:**Solve**complexcontourintegralsdirectlyandbythefundamentaltheorem,applythe Cauchy integral theorem in its various versions, and the Cauchy integral formula.

CO5:Classifysingularitiesandpoles,findresiduesandevaluatecomplexintegralsusingthe residue theorem. Represent functions as Taylor, power and Laurent series

LaplaceTransformsAndFourierSeries

CO1:SolvetheLaplacetransformofstandardfunctionsfrom the definitions.

CO2:**Use** theappropriateshifttheoremsinfindingLaplaceandinverseLaplace transforms

CO3:**Combine**thenecessaryLaplacetransformtechniquestosolvesecond-orderordinary differential equations.

CO4:**Analyse**theFourier transformofelementaryfunctions fromthe definition.

CO5:DeveloprealandcomplexformsoftheFourierseriesforstandardperiodicwaveforms and convert from real-form Fourier series to complex-form and vice-versa.

Linear Algebra

CO1:Constructmathematicalargumentsthatrelatetothestudyofintroductorylinear algebra.
CO2:**Solve**thecharacteristicpolynomial, eigenvectors,eigenvalues.
CO3:**Analyze**finiteandinfinitedimensionalvectorspacesandsubspacesoverafieldand their properties, including the basis structure of vector spaces
CO4: **Use** the definition and properties of linear transformations and matrices of lineartransformationsandchangeofbasis,includingkernel,rangeandisomorphism.
CO5:Explainorthogonalityonvectorspacesandcomputeinnerproductsand,including Gram-Schmidt orthogonalization

NumericalAnalysis

CO1:Categorize thetheoreticalandpractical aspectsof theuseofnumericalmethods.
CO2:**Explain**howthecommonnumericalmethodsandareusedtoobtainapproximate solutions to intractable mathematical problems.
CO3: **Develop** numerical methods for various mathematical operations and tasks, such as interpolation,differentiation,integration,thesolutionoflinearandnonlinearequations, and the solution of differential equations.
CO4:**Analyse**andevaluate theaccuracyofcommonnumericalmethods.
CO5:Selectappropriatenumericalmethodstoapplytovarioustypesofproblemsin engineering and science in consideration of the mathematical operations.

Real Analysis

CO1:Categorize thereallineasa complete,orderedfield.
CO2:**Use** thedefinitionsofconvergenceastheyapplytosequences,series,andfunctions.
CO3:**Identify**thecontinuity,differentiability,andinerrabilityoffunctionsdefinedon subsets of the real line.
CO4:**Apply**theMeanValueTheoremandtheFundamentalTheoremofCalculusto problems in the context of real analysis.
CO5:ExplaintheRiemannintegrabilityandtheRiemann-Stieltjesintegrabilityofabounded function and prove a selection of theorems concerning integration.

Solid Geometry

CO1:Usekeystandards andconventionstocommunicategraphic ideasandinformation
CO2:**Demonstrate**knowledgeand understandingofplaneandsolidgeometry.
CO3: **Develop** factual knowledge including the mathematical notation and terminology ingeometry; points, lines, and angles; planar figures.
CO4:**Evaluate**thesurface areaof sphere -greatcircleandvolumeof sphere, cone.
CO5: Explain the properties of a cylinder. Measure and determine the surface area andVolume of a cylinder.

FundamentalsOfInformation Technology

CO1:Understandbasiccomputerterminologyand numbersystems
CO2:Explain aboutoperatingsystems, andits types
CO3:Applymodernmeansof communications,typesofnetworksand topologies
CO4:Identifydifferentapplications ofInformationsystem
CO5:ClassifyInternetandnetworks

ProblemSolvingandProgrammingthroughC

CO1:Understandthebasicintroductionofcomputer andprogramminglanguage
CO2:Identify'C'datatypes,operatorsand datainput/outputfunctions
CO3:Categorize'C'controlstructures, arrays and stringconcept
CO4:Explain 'C'function,recursion,pointers anddynamicmemoryallocation
CO5:Expresstheconceptofstructures,unionandfilehandlingin'C'.

C++andNumericalMethods

CO1:UnderstandC++programmingbasics ,operators ,datatypes
CO2: Apply constructors and destructors
CO3:ExplainInheritance,polymorphism
CO4: Create classes for file streams
CO5:Develop solutionsofequationswithnumericalanalysis

DataBaseManagement Systems

CO1:Describe EntityRelationshipandEnhancedERmodel.
CO2:Understand therelationalmodel,reductiontorelationschema,relationalalgebraand normalization
CO3:IdentifySQL-thestandardlanguageofrelationaldatabasesandPL/SQL programming
CO4:Explainthestorageandfilestructure,storageaccess,indexingandhashingtechniques of the database
CO5:Understandtheconcept ofTransactions,recovery systemand concurrency control.

SystemAnalysisand Design

CO1:Understandthesystemdevelopment environment
CO2:Applythestructuringsystemrequirements
CO3:Explain designobjectivesandtransform analysis
CO4:Identify Objectorientedsystemdesignand development
CO5:ConstructUMLdiagrams

ComputerNetworks

CO1:Understandandidentifybasiccomputernetworktopologiesandprotocolsandexplain Data Communication System components and functions of each layer in OSI model and its protocols.
CO2:Classifydifferenterrordetecting techniques.
CO3:Create skillsofsub-nettingandroutingmechanisms.

CO4:Identifydifferentinternetworkingdevices
CO5:ComparedifferentOSIupper layers

Java Programming

CO1:Understandjavaprogramstructureanddifferentiatebetweenobject-oriented programming and procedure- oriented programming.
CO2:ApplyOperatorsandexpressions,decisionmakingandclasses,objectsandmethods concepts
CO3:Explain UseofArrays,StringsandPackages
CO4:SolveMultithreading,exceptionhandlingmechanism,withbasicappletprogramming
CO5:Develop interactiveprograms usingapplet workingwithgraphics AWT

OperatingSystems

CO1:IdentifythemaincomponentsofanOS&their functions
CO2:Analyze variousissuesinInterProcessCommunication(IPC)andtheroleofOSin IPC.
CO3:ExplainProcesssynchronization,Deadlocks-deadlockcharacterization,methodsfor handling deadlocks
CO4:ComparetheconceptsandimplementationMemorymanagementpoliciesandvirtual memory
CO5:Understand theworkingofanOSasaresourcemanager,filesystemmanager,process manager, memory manager and I/O manager and methods used to implement the different parts of OS

SoftwareEngineering

CO1:Explain engineering throughvariousprocess models.
CO2:Identifyanalyze Requirements,ObjectOrientedandvarious modeling's.
CO3:Categorizedesign and architecture
CO4:ClassifyComponents,goldenrulesand designevaluation
CO5:Understandtestingtechniques toevaluatequalitymetrics

B.Sc.ComputerDataScience&DataAnalyticsEngg.

ProgramSpecificOutcomes:

Studentswillbeableto:

PSO1: Applycomputersciencelanguagesandalgorithms,aswellasmathematicalandstatistical models for developing solutions to the real world problems.
PSO2: Understand the fundamentals of Computer Organization, Operating Systems and networkingrelatedconceptsandapplytheknowledgeofcomputersystemsindesigning and building software solutions.
PSO3: Demonstrate, identify,formulateandanalysediversebigdataproblems helpinginbusiness

decisionmaking. Applysupervised andunsupervisedmachinelearning methodologies.

PSO4: ApplyappropriateDataMiningandTextMiningtechniquesforcleaning,processingand transforming the data. Analyze and interpret the data using an ethically responsible approach and derive insights from it.

GeneralEnglishI

Through an exposure to contemporary passages, the students would be able to have a grasp on the language of today, with specific emphasis on the Listening, Speaking, Reading and Writing skills. Through the components of a passage, vocabulary and grammar section, speaking component and writing segments, there is a holistic development for language proficiency and fluency.

Thestudentswouldspecificallybeable to:

CO1: Distinguish between words which are either spelt or pronounced alike, yet render distinct meanings;impartingasoundclarityoneverydayusageandmiscommunicationsembedded in language

CO2:Developtheartofparallellisteningandwriting;theartofswift,crispandorganizedwriting through note making

CO3:Improvedictionandgainunderstandingonthetensecomponent,apivotalconstituentfor language structuring.

CO4: Transfer the data in pictorial or graphical representations to a textual format, in order to restateinformationindifferentformsintheirpresentacademicorfutureprofessionallives.

CO5:Identifywitheconomicalwordconstructions,payingspecificattentiontovocabulary building in English

CO6:Constructtheirwritingskillsinwritingformallettersandtodesigntheircurriculumvitae efficiently to venture into future job endeavors

CO7:Interpretsubject-verbagreement,thebasicpartinvolvedinsentenceconstructingtoimprove their linguistic skills

CO8: Gainknowledgetoplantechnicalandprojectreportsfor,writingresponsestoinstructions for a person in authority, or for presenting a proposal to the clients.

CO9:Extendtheirlanguageefficiencythroughthegrammarcomponentofcommonlyconfused and misspelt words, and errors related to vocabulary and different aspects of grammar, which would be seemingly helpful for language delivery

CO10: Cite varied sources of references, and become skilled at constructing a bibliography, an importantpieceofacademicwritingtoacknowledgetheauthor'sdebttoothers,forfacts and ideas a book or paper is built on

FundamentalsOfInformation Technology

CO1:Understandbasiccomputerterminologyand numbersystems.

CO2:Learn aboutoperatingsystems, and itstypes.

CO3:Learn abouttheapplicationsofInformationtechnology

CO4:Importanceofsystem developmentand thephases ofSDLC

CO5:Useofmodern meansofcommunications,typesof networksandtopologies

DifferentialEquationsandNumber Theory

CO1: Classifythe differential equations with respect to their order and linearity.Solve differentialequationsoffirstorderusingnumericalandanalyticalmethodssuchas Integrating Factors.

CO2: AnalyzeandSolvebasicapplicationproblemsdescribedbyfirstorderdifferentialequations. such as orthogonal trajectories.
CO3:**Solve**secondorderHomogeneousEquationswithConstantCoefficients.Obtainexactand numerical solutions using differential equations technology.
CO4: Expressthe conceptsandresultsofNumber Theory.
CO5: Demonstrateknowledgeandunderstandingoftopicsincluding,divisibility,primenumbers, congruences.

DescriptiveStatisticsAndProbabilityDistributions–I

CO1: Organize,manageandpresentdataandAnalyzestatisticaldatausingmeasuresofcentral tendency
CO2: Analyze thestatisticaldatausingdispersionandlocation.
CO3: Usethebasicprobabilityrules,includingadditiveandmultiplicativelaws,usingtheterms, independent and mutually exclusive events.
CO4: Developtheprobabilitydensityfunctionoftransformationofrandomvariables.
CO5: Identifyprobabilities,andderivethemarginalandconditionaldistributionsofbivariate random variables.

ProblemSolvingandProgrammingthroughC

CO1:Understandthebasicintroductionofcomputer andprogramminglanguage.
CO2:Identify'C'data types,operatorsanddatainput/outputfunctions.
CO3:Categorize'C'controlstructures, arrays and stringconcept.
CO4:Explain 'C'function,recursion,pointers anddynamicmemoryallocation.
CO5:Expressthe conceptofstructures,unionandfilehandlingin'C'.

GeneralEnglish-II

Toenhance thelearner'scommunicationskillsbygiving adequate exposuretoincrease their proficiency in reading, writing, listening and speaking skills and the related sub skills.
Studentswillbeableto:
CO1:Haveasoundunderstandingontheformationofwordsandindescribingthefunctional grammatical component in the sentence.
CO2:Applytheirwritingskillsforbriefwriteupsandspeakingskillsforrespondingtoopinion based questions.
CO3:Identifytheappropriate ModalAuxiliaryverbsfor theaptmeaning andusage
CO4:Learntheartofconstructinganexhaustivereporttosuitvaried circumstancesandinstances
CO5:CreateanoutlookintoIndianLiterature;alongsidedevelopandchiseltheircommunication skills
CO6:Demonstratetheir descriptiveskillsforeffective expressioninwriting
CO7:Recognizethemoralelementwhichunderliesintheshortstory; anexposuretoinformal language
CO8:Discoverandtoenhance recallandcomprehensionof thecontentmaterial
CO9:Developlisteningandspeakingskillsthroughheffectivesentenceconstructionsandefficient delivery
CO10:Paraphrasingideasandthoughtsinacoherent,neatandorganizedmannerfor soundwriting

propagandas

IndianHeritageandCulture

CO1: This unit makes the student to *understand* better about the origin of ancient Indian culture thecontributionsofgreatrulersfrombothnorthandsouthIndiaforIndianculture inancient days

CO2:StudentswillAnalysehowPersianculture enteredintoIndiaanditinfluencetheFineArts of Indian society like Classical Music, Dance and Architecture.

CO3: Student is able to assess how the Indian orthodox society turn into modern and western societyinthe19thcentury. Italsoedifiesthestudentswithspiritualdoctrinesofvarious Religions.

CO4:Studentswill*evaluate*variouschallengesfacebytheyouthandtheevilseffectsofterrorism on society

CO5:ThetopicsintheunitCreatebelongingnessamongthestudentsbybringingawarenessof the rights and duties to make the world a better place and it throw light on gender sensitization issues of women, Children and LGBT

AbstractAlgebra

CO1: Demonstrateimportantmathematicalconceptsinabstractalgebrasuchasdefinitionofa group, order of a finite group and order of an element.

CO2:Analyzedifferenttypesofsubgroupssuchasnormalsubgroups,cyclicsubgroupsand understand the structure and characteristics of these subgroups

CO3:Solvethealgebraic problemsusingappropriate techniques.

CO4:Analyzetheknowledgeandunderstandingoffundamentalconceptsincludinggroups, subgroups, normal subgroups, homomorphism and isomorphism.

CO5: Demonstrateknowledge andunderstanding ofrings,fieldsand their properties.

NumericalAnalysis

CO1: Categorizethetheoreticalandpractical aspectsof theuseofnumericalmethods.

CO2:Explainhowthecommonnumericalmethodsandareusedtoobtainapproximatesolutions to intractable mathematical problems.

CO3: Develop numerical methods for various mathematical operations and tasks, such as interpolation,differentiation,integration,thesolutionoflinearandnonlinearequations,and the solution of differential equations.

CO4:Analyseandevaluatetheaccuracyofcommonnumericalmethods.

CO5: Selectappropriatenumericalmethodstoapplytovarioustypesofproblemsinengineering and science in consideration of the mathematical operations.

DescriptiveStatisticsandProbabilityDistributions–II

CO1: Usediscreteandcontinuousprobabilitydistributions,includingrequirements,meanand variance, and making decisions

CO2: Identify thecharacteristics ofdifferentdiscretedistributions.

CO3: Applythenormalprobabilitydistributionincludingstandardnormalcurvecalculationsof appropriate areas.

CO4: Chooseexponential,betaandGammadistributionstosolvestatisticalproblems.

CO5: Develop differentdistributionstosolvevarious statisticalproblems.

DataStructuresthroughC

CO1: Chooseappropriatedatastructurestorepresentdata itemsinrealworldproblems
CO2:Illustratenon-lineardatastructureslikelinkedlist
CO3:Organizethedatausingsortinginvariouslineardatastructuresanddeterminetime complexity
CO4:Constructdatawithnonlineardatastructure usingtrees.
CO5:Explaintheconceptofgraphsandbtrees

PythonProgramming

CO1:ImplementthestructureandcomponentsofaPythonprogram.
CO2:Express howto write loopsand decision statements in Python.
CO3:InterprethowtowritefunctionsandpassargumentsinPython.
CO4:ExplainbuildandpackagePython modulesfor reusability.
CO5:Createfilesandhandle exceptions

PythonProgramming

CO1:Implement thestructureandcomponentsof aPythonprogram.
CO2:Chooseappropriate data structures.
CO3:InterprethowtowritefunctionsandpassargumentsinPython.
CO4:Categorizedifferent exception.
CO5:UnderstandbasicGUIprogramming

ComputerOrganization

CO1: Understand basic Circuitdesigningandnumber systems
CO2: Explainabouthowdata transferredfromone registertoanother register
CO3: ConstructdesigningofcontrolunitandCentralProcessingUnit
CO4: Classify different types of computer arithmetic operations
CO5: Categorize all peripheral devices and memory

StatisticalMethodsandInference–I

CO1: Interpretthecorrelationbetween twovariables.
CO2: Distinguish the principles of linear regression and correlation, including least square method,predictingaparticularvalueofYforagivenvalueofXandsignificanceofthe correlation coefficient.
CO3: Showtheassociationbetweenthe attributes.
CO4: Generalizethepropertiesof estimators.
CO5: Differentiate Maximumlikelyhoodestimationandmethodof moments

DatabaseManagementSystems

CO1:To describe EntityRelationshipandEnhancedERmodel.
CO2:Tounderstandtherelationalmodel,reductiontorelationschema,relationalalgebraand normalization.
CO3:To useSQL-thestandardlanguageofrelational databasesand PL/SQL programming.
CO4:To understandthestorage and filestructure, storage access,indexingandhashingtechniques

ofthedatabase.
CO5:TounderstandtheconceptofTransactions,recovery systemand concurrency control.

AccountingandFinancialManagement
CO1:Todescribetheneedandimportanceofaccountingandinferthevariousprinciplesof accounting
CO2:ToExplainaboutbranchesof accounting
CO3:Toanalyze thefinancialpositionof anorganization
CO4:Tointerpretthe sources of finance.
CO5:Tocreatebudgetsforkeyfactorsof organization.

RProgramming
CO1:UnderstandbasicconceptofR.
CO2:Demonstrateprogramming conceptsand datastructuresinR.
CO3: Analyze a large problem by sub dividing it into smaller components using functions
CO4:Chooseanappropriategraphicforanalysisandanalyzedatausingsummarystatistics. **CO5**: Choose the type of regression based on data set.

DataMiningandDataWarehousing
CO1:TounderstandtheconceptsofdataminingandItsimportance
CO2:Analyze differentclassificationand clusteringmethodsusing algorithms
CO3:Explainthedataflowandtheconceptsofwarehousing
CO4:Expresshowtobuilddatamartsandtolearnaboutdimensionalmodeling.
CO5:Identify conceptsofExtraction, Transformationand loading.

OperatingSystems
CO1:IdentifythemaincomponentsofanOS&their functions
CO2:AnalyzevariousissuesinInterProcessCommunication(IPC)and therole ofOSinIPC.
CO3:ExplainProcesssynchronization,Deadlocks-deadlockcharacterization,methodsfor handling deadlocks.
CO4:ComparetheconceptsandimplementationMemorymanagementpoliciesandvirtual memory.
CO5: Understand the working of an OS as a resource manager, file system manager, process manager,memorymanagerandI/Omanagerandmethodsusedtoimplementthedifferent parts of OS

StatisticalInference–II
CO1: Developthedistributionalresultsneededforstatistical inference.
CO2: Analyzehypothesestestsofmeans,proportionsandvariancesusingbothone-andtwo- sample data sets.
CO3: ExplainChi-Squared testforindependenceofattributesand goodness offit.
CO4: Differentiatebetweenthetestsstatisticstobeusedfordependentandindependentsamples.
CO5: Designthe teststatistictobeused whenthenature ofthedistributionisunknown.

Java Programming

CO1:Writejavaprogramsanddifferentiatebetweenobject-orientedprogrammingandprocedure-oriented programming.
CO2:Applyobject-orientedprogrammingfeatures forsolvingagivenproblem.
CO3:Incorporateexceptionhandlingmechanism.
CO4:Implement Usejavastandard APIlibrarytohandlefile operations.
CO5:Develop interactiveprogramsusingapplet andswing

OperationsResearch

CO1: Identifythevarioustechniquesofoperationsresearchandtotranslateareal–world problem, given in words, into a mathematical formulation.
CO2: Constructthesimplex tableandtoplantheoptimum results.
CO3: Use theprogramforoptimizingthecostinvolvedintransportationproblems
CO4: Develop andsolvetransformationmodelsandassignmentmodels
CO5: Designthe sequenceofjobsand tomake upthetotalprocesstime

DataVisualizationTools

CO1:Understand theway of representing visual dataand itsapplications.
CO2:Demonstratedatavisualizationusingcombinationofvariouscharts.
CO3: Apply visualizing techniques using matplotlib package.
CO4:Designeffectivegraphicalanalysis inR
CO5:ConstructdatavisualizationswithTableautocreate customizeddashboards andreports.

SoftwareTesting& Quality

CO1:Analyzeimportanceoftestinginsoftwaredevelopmentprocess,applyglass-boxtesting, black-box testing, and how to report and analyze bugs
CO2:Identify problemtrackingsystem, differenttypesoftestingandtestcasedesign.
CO3:Tounderstandhowtobuildtestingstrategy,establishingsoftwaretestingmethodologyand software testing techniques.
CO4:Explain thedefinitionofquality,metricsfor softwarequalityandinspectiontechniques.
CO5:Classifysoftwareconfigurationmanagement,softwarereengineeringandsoftware restructuring techniques.

SoftwareEngineering

CO1:Explain engineering throughvariousprocess models.
CO2:Identifyanalyze Requirements,ObjectOrientedandvarious modeling's.
CO3:Categorizedesign and architecture
CO4:ClassifyComponents,goldenrulesand designevaluation.
CO5:To understandtestingtechniques toevaluatequalitymetrics

Text Mining

CO1: Demonstrate anunderstandingoftheimportanceof Textminingandits relatedareas
CO2: Compare theappropriatedata miningmethodslikeclassificationandclustering.
CO3: Applytheconceptsofinformationextractionandretrieval.
CO4: Identifyhowtoapplymetricstomeasuretheperformanceofvariousminingalgorithms.

CO5: Analysethedatavisualizationtechniques,usethedatacollectedinenterpriseapplythe interpret it.

DataAnalyticsandDecisionMaking

CO1: Understandtherole ofdatainevidencebaseddecisionmaking
CO2: Examinethe systemsbywhichdataisorcanbe made available
CO3: Possessanunderstandingofmeasurementissuesandprocessesforunderstanding relationships based on statistical theory
CO4: Applymodern quantitativetoolstodataanalysisinabusinesscontext
CO5: Analyse andinterpretdatatoprovide meaningfulinformationtoassistindecisionmaking

MachineLearningTechniques

CO1: Haveagoodunderstandingofthefundamentalissuesandchallengesofmachinelearning: data, model selection, model complexity, etc.
CO2: Classifythelearningalgorithmsand applytothegivendata set.
CO3: Identifytheunderlyingmathematicalrelationshipswithinandacross Machine Learning algorithms and the paradigms of supervised and un-supervised learning.
CO4: Evaluate andinterprettheresultsofthe algorithms.
CO5: Designandimplementmachinelearningsolutionstoclassification,regression,and clustering problems

ComputerNetworks

CO1: Understandandidentifybasiccomputernetworktopologiesandprotocolsandexplain Data Communication System components.
CO2: Describethe functionsofeachlayer inOSImodelanditsprotocols.
CO3: Classifydifferenterrordetecting techniques.
CO4: Buildskillsofsub-nettingandroutingmechanisms.
CO5: ClassifytheroutingprotocolsandanalyzehowtoassigntheIPaddressesforthegiven network

Data Security

CO1: Identifysomeofthefactorsdrivingtheneedfor data security
CO2: Examineand classifyparticularexamplesof attacks
CO3: Classifythetermsvulnerability,threat andattack
CO4: Analyze physical pointsofvulnerabilityinsimplenetworks
CO5: Compareandcontrastsymmetricandasymmetricencryptionsystemsandtheirvulnerability to attack, and explain the characteristics of hybrid systems.

CloudComputing

CO1: Understand distributedsystemsforcloud computing
CO2: Identify cloudservers, typesand components

CO3: Analysecloudarchitecturalinformation inthepresentgenerationof market
CO4: Compare typesofclientsinthecloudandvirtualization
CO5: Examinevirtual machinesthemarket andusage

MarketingData Analytics
CO1: Understandmarketresearchmethods
CO2: Analyzeconsumerbehaviourandmarketing strategy
CO3: Identify market basket analysis
CO4: Examine survival analysis
CO5: Classifycustomersegmentation

SocialMediaAnalytics
CO1: Identifyvariousplatformsinsocial media
CO2: Understand processingofsocialmedia
CO3: Comparedifferences between twitterandothersocialmedianetworks
CO4: AnalyzeFacebook informationand writebusiness cases
CO5: DifferentiatesocialmedianetworksInstagram(i.e.,usageofinstagramanddataprocessing techniques also they will get idea)

BigDataAnalytics
CO1: Explainthemotivationforbigdatasystemsandidentifythemainsourcesof BigDatainthe real world.
CO2: Developtechnicalskillsinpredicativeandprescriptivemodelingtosupportbusiness decision-making.
CO3: ImplementseveralDataIntensivetasksusingtheMapReduce Paradigm.
CO4: Understand Hadoop ecosystemsuchasYARNand HIVE-QLforstructured databases.
CO5: Demonstrateanabilitymap-reduceprogrammingusingPIGandNoSQLdatabasesfor storing purpose and process for Big Data Analytics

B.Sc.ElectronicsTechnology

ProgramSpecificOutcomes:

Studentswillbeableto:

PSO1: Studentswillbeabletounderstandtheconceptsandapplyfundamentalsofelectronicsin various domains of analog and digital systems.
PSO2: Designandanalyzevariousfunctionalelementsofdifferentmodesofcommunications systems
PSO3: Implementanddemonstratevarietyofautomationsystemsbycontrolling,processing different signals according to the required specifications.
PSO4: CompetewiththepeoplewhoareusingelectronichardwareandsoftwareITtoolsforthe design and analysis of complex electronic systems in furtherance to research activities.
PSO5: Excellentadaptabilitytochanging workenvironment,good interpersonal skillsasa

leaderinateamwithgoodskillstocommunicate inbothoralandwrittenforms.

GeneralEnglish-I

Throughanexposuretocontemporarypassages,thestudentswouldbeabletohaveagrasponthe language oftoday, with specific emphasis on theListening, Speaking, Reading and Writing skills. Through the components of a passage, vocabulary and grammar section, speaking component and writing segments, there is a holistic development for language proficiency and fluency.

Thestudentswouldspecificallybeable to:

CO1:

1. Distinguish between words which are either spelt or pronounced alike, yet render distinct meanings;impartingasoundclarityoneverydayusageandmiscommunicationsembeddedin language
2. Developtheartofparallellisteningandwriting; theartofswift,crispandorganizedwriting through note making

CO2:

1. Improvedictionandgainunderstandingonthetensecomponent,apivotalconstituentfor language structuring.
2. Transferthedatainpictorialorgraphicalrepresentationstoatextualformat,inordertorestate information in different forms in their present academic or future professional lives.

CO3:

1. Identifywitheconomicalwordconstructions,payingspecificattentiontovocabularybuildingin English
2. Enhancetheirwritingskillsinwritingformallettersandtostructuretheircurriculumvitae efficiently to venture into future job endeavors

CO4:

1. Learnsubject-verbagreement,thebasicpartinvolvedinsentenceconstructingtoimprove their linguistic skills
2. Gainknowledgeinframingtechnicalandprojectreportsforwritingresponsestoinstructions for a person in authority, or for presenting a proposal to the clients.

CO5:

1. Polish their language efficiency through the grammar component of commonly confused and misspeltwords,anderrorsrelatedtovocabularyanddifferentaspectsofgrammar,whichwould be seemingly helpful for language delivery
2. Cite varied sources of references, and become skilled at constructing a bibliography , an importantpieceofacademicwritingtoacknowledgetheauthor'sdebttoothers,forfactsand ideas a book or paper is built on.

ProgramminginC& DataStructures

CO1: DescribethefeaturesofProcedureOrientedProgramming
CO2: Solve real life problems using Arrays and Functions**CO3:**
Differentiate between call by value and call by reference
CO4: Understand theconceptsof Pointersand DynamicMemoryAllocation
CO5: Analyzedatastructures likestacks,linkedlists

MathematicsFoundationforElectronics

CO1: Categorizethedifferentialequations withrespecttotheirorderandlinearity.Solve differentialequationsoffirstorderusingnumericalandanalyticalmethodssuchas Integrating Factors.
CO2: AnalyzeandSolvebasicapplicationproblemsdescribedbyfirstorderdifferential equations. Such as circuits, orthogonal trajectories.
CO3: SolvesecondorderHomogeneousEquationswithConstantCoefficients.Obtainexactand numerical solutions using differential equations technology.
CO4: Formulate thesolutionsetofasystemoflinear equations..
CO5: Solvethecharacteristicpolynomial, eigenvectors, eigenvalues.

Mechanics(Physics-I)

CO1: Explainbasiclawsofmotionandlawsofmechanics
CO2: Applylawsofmotiononrigidbodiestostudytheirfundamentallaws **CO3:**
Identify the importance of basic laws to study the motion of planets **CO4:**
Able to judge relative motion of systems
CO5: Analyzewaves andtheirpropagation mathematically

BasicCircuittheory andNetworkAnalysis

CO1: Applytechnique electricalnetworksinpresence ofactive and passive elements.
CO2: ClassifyElectricalnetworkswithnetwork topology concepts.
CO3: Analyzemagneticcircuitwithvariousdotconventions.Electricalnetworksbyusingprinciplesof network theorems
CO4: AnalyzeR,L, CnetworkwithsinusoidalexcitationCO5:Use R,L,networkwithvariationofanyoneofthe parametersi.eR,L,C.andf

GeneralEnglish-II

Toenhancethelearner'scommunicationskillsbygivingadequateexposuretoincreasetheirproficiency in reading, writing, listening and speaking skills and the related sub skills.

Studentswillbeableto:

CO1:

1. Haveasoundunderstandingontheformationofwordsandonthefunctionalgrammatical component in the sentence.

2. Enhancetheirwritingskillsforbriefwriteupsandspeakingskillsforrespondingtoopinion based questions.

CO2:

1. Identifytheappropriate ModalAuxiliaryverbs fortheaptmeaningandusage
2. Learntheartof exhaustivereportwritingtosuitvaried circumstancesandinstances

CO3:

1. HaveaglimpseintoIndianLiterature;alongsidedevelop and chiseltheircommunicationskills
2. Enhancetheirdescriptiveskillsforeffective expressioninwriting

CO4:

1. Graspthemoralelementwhichunderliesintheshortstory;an exposuretoinformallanguage
2. Discoverandtoenhancerecalland comprehensionofthecontentmaterial

CO5:

1. Developlisteningandspeakingskillsthrougheffectivesentenceconstructionsandefficient delivery
2. Paraphrasingideasandthoughtsinacoherent,neatandorganizedmannerforsoundwriting propagandas

IndianHeritage&Culture

CO1:

1. Thisunitmakesthestudenttounderstandbetter abouttheoriginofancientIndianculture
2. Student will come to know the contributions of great rulers from both north and south India for Indian culture in ancient days

CO2:

1. StudentswillunderstandhowPersianculture enteredintoIndiaandhow itinfluenced.
2. It alsohelpsthestudenttoknowtheFineArtsofIndia likeClassicalMusic,Dance etc.

CO3:

1. ThisunitexplainshowIndianorthodoxsocietyturnintomodernandintowesternlifestyle in19th century.
2. ItgivesaGlimpseofIndianfreedommovementandalsoedifiesthestudentwithspiritual doctrines of the country by explaining various Religions.

CO4:

1. Bystudyingthisunitstudentwilllearntherightsofchildrenandvariouschallengesfacingbythe youth of Indian society.
2. Ithelpsthemtounderstandthe evilsofterrorismand itsimpactonsociety

CO5:

1. These topics in the unit help the students to know various gender issues like women rights andabout LGBT issues.
2. Studentwillknowhisrightsanddutiestomaketheworldabetterplacetolive

ObjectOrientedProgrammingwith C++

CO1: MemorizetheconceptsofObjectorientedprogramming
CO2: ApplyControlstructurestowrite programs
CO3: Differentiatethetypesof constrictors
CO4: Demonstratepolymorphismsandtypesof Inheritance
CO5: Analyze theconceptofTemplate andfiles.

VectorCalculus,3d-gemetry,Fourier series

CO1: Categorizethevector-valuedfunctionsofarealvariableandtheircurves,Gradientvector fields and constructing potentials.
CO2: Analyzethedifferentialideasofdivergence,curl,andtheLaplacianalongwiththeir physicalinterpretations.
CO3: Use theapplicationsofGreen'stheoremintheplane, Gaussdivergence theoremand

Stake'stheorem.

CO4: SolvetheLaplacetransformofstandardfunctionsfromthe definitions.

CO5: CombinethenecessaryLaplacetransformtechniquestosolvesecond-orderordinary differential equations.

Wavesand Oscillations

CO1: Explainconceptsofwave anditscharacteristics

CO2: Differentiatetypesofwaves and oscillations

CO3: Applytheconceptofwavepropagationtothestrings

CO4: Apply the concept of wave propagation to the bars.

CO5: Design a new application based on ultrasonic sound.

ElectronicDevicesand Circuits

CO1: Studythecrystalstructureandanalyzethebehaviour ofsemiconductor material

CO2: Explainthevariousvoltagesacrossandcurrentflowthroughapnjunctionwithvarying doping concentrations

CO3: ExplainthevariousvoltagesacrossandcurrentflowthroughanyTrasnsistorinvariovs configurations junction with varying doping concentrations which help to realize an amplifier circuit.

CO4: Analyzevariousfactorsinfluencing atransistor.

CO5: Understandthetypeofsemiconductormaterialusedinpowerandoptoelectronicdevices and analyze the current flow through them.

RepairandMaintenanceofHomeAppliances

CO1: Identify various electronic components.

CO2: Constructadc power supply.

CO3: Explainthecharacteristicsof transistors.

CO4: Chooseanoperatingsystem for therequiredapplication.

CO5: Demonstratetheworking ofelectricalappliance.

FunctionsofaComplexVariable

CO1: Represent complexnumbersalgebraicallyandgeometricallyand define.

CO2: Applylimitsandcontinuityforcomplexfunctionsaswellasconsequencesofcontinuity.

CO3: Analyzetheconceptandconsequencesofanalyticityandthe Cauchy-Riemannequations. **CO4:** Solve complex contour integrals directly and by the fundamental theorem, apply the Cauchyintegral theoreminitsvarious versions,andtheCauchyintegralformula.

CO5: Classifysingularitiesandpoles,findresiduesandevaluatecomplexintegralsusingthe residue theorem. Represent functions as Taylor, power and Laurent series

ElectromagneticTheory

CO1: ExplainfundamentallawsgoverningEMfieldsandevaluatethephysicalquantitiesofEM fields (field intensity, flux density, etc.) in different media using the fundamental laws.

CO2: Designstoragedevices usingdielectrics,capacitors, inductorsusinglawsofEMfields
CO3: Applyprinciplesofmagnetostatisticstothesolutionsofproblemsrelatingtothemagnetic field and magnetic potential and to describe magnetic field around a moving charge.
CO4: ApplylawsofEMIondeviceslikebetatron,movingballisticgalvanometer ,transformers, etc.....
CO5: AnalyzeElectromagneticwavepropagationandimportanceofMaxwell's equations.

Logic&Digital Circuits

CO1: Convertdifferenttypeofcodesandnumbersystemswhichareusedindigital communication and computer systems.
CO2: EmploythecodesandnumbersystemsconvertingcircuitsandComparedifferenttypesof logic families which are the basic unit of different types of logic gates in the domain of economy, performance and efficiency.
CO3: Analyzedifferenttypesofdigitalelectroniccircuitusingvariousmappingandlogical tools and know the techniques to prepare the most simplified circuit using various mapping and mathematical methods.
CO4: Designdifferent typesofwithandwithoutmemoryelementdigital electroniccircuits for particularoperation,withintherealmofeconomic,performance,efficiency,userfriendly and environmental constraints.
CO5: Assessthenomenclatureandtechnologyintheareaofmemorydevicesandapplythe memorydevices in different types of digital circuits for real world application.

ElectronicWaveShapingCircuits

CO1: Designand constructaDCpower supply
CO2: Analyzethefunctionofwaveshapingcircuitsanddifferentiatebetweenlinearandnon linear wave shaping.
CO3: Designand constructamplifierandoscillatorcircuits anddifferentiatebetween them
CO4: Classifydifferenttypesofpower amplifiers
CO5: Designand constructdifferenttypesoftimingcircuits

GroupTheory&DifferentialCalculus

CO1: Applyconceptsinabstractalgebrasuchasdefinitionofagroup,orderofafinitegroup and order of an element.
CO2: Categorizetypesofsubgroupssuchasnormalsubgroups,cyclicsubgroupsandunderstand the structure and characteristics of these subgroups.
CO3: Understand thedefinitionsofHomomorphism–Cayley'stheorem.
CO4: AnalyzetheconsequencesofRolle'sTheoremandtheMeanValuetheoremfor differentiable functions.
CO5: Applydivergence testtodeterminedivergence ofaninfiniteseries.

ModernPhysics

CO1: Explaindifferenttypesofatomicspectrums
CO2: Classify the different molecular spectrums
CO3: Analyze nucleus and compare with atom

CO4: Surveyonmicroscopic particles
CO5: Develop newtypes ofmaterialsfordifferentapplications

ElectronicCommunicationTechniques
CO1: Torecognizethebasiccomponentsofacommunicationsystem **CO2:**
To illustrate the basic modulation systems and classification **CO3:** To
sketch the modulated wave forms
CO4: Toclassify analoganddigital communication system
CO5: Todifferentiatenewdigital, mobiletechniques

LinearIntegrated circuits
CO1: Tounderstandthebasicdifferentialamplifier,thebasicbuildingblockofoperational amplifier and its practical details.
CO2: Toexplainthegenerallinearapplicationofanoperationalamplifier. **CO3:**
To describe the wave generation wave shaping circuits of op-amp. **CO4:**
To identify the non-linear applications.
CO5: TocreatethespecializedICapplications.

Java
CO1: Expressjavaprogramstructureanddifferentiatebetweenobject-orientedprogrammingand procedure- oriented programming.
CO2: ApplyOperatorsand expressions,decision makingbranchingandlooping
CO3: ExplainUseofClasses,objects,methods,Arrays anditstypes.
CO4: SolveMultithreading,exceptionhandlingmechanisms
CO5: Develop appletprograms tocreateinteractivewebpages

ComputerOrganization
CO1: Tounderstandbasiccomputer operations
CO2: Toexplainbasic computerorganizationaldesign
CO3: To classify the different blocks of the basic computer
CO4: Tocomparedatatransferwithdifferentaddressingmodes
CO5: To analyze the memory organization

NumericalAnalysis
CO1: Identifythetheoreticalandpracticalaspectsoftheuseofnumericalmethods.
CO2: Demonstrateunderstandingofcommonnumericalmethodsandhowtheyareusedto obtain approximate solutions to otherwise intractable mathematical problems.
CO3: Applynumericalmethodstoobtainapproximatesolutionstomathematicalproblems.
CO4: Develop numerical methods for various mathematical operations and tasks, such as interpolation,differentiation,integration,thesolutionoflinearandnonlinearequations, and the solution of differential equations.
CO5: Analyzeandevaluatethenumerical solutionofordinary differential equations.

Microprocessor&Microcontroller

CO1: Explainthemicroprocessor'sinternalarchitectureanditsoperationwithintheareaof manufacturing and performance.

CO2: Applyknowledgeanddemonstrateprogrammingproficiencyusingthevariousaddressing modes and instructions of the target microprocessor.

CO3: Toanalyzetheneedofvariousinterfacingdeviceslike8255,8259alongwithinterrupt types and stack

CO4: Toexplaintheco-processortoperformmathematicaloperations,USART,DMAand timers functional block diagrams

CO5: Toexplainthedifferencebetweenprocessorand controllerwitharchitectureof 8051.

Microwaves&Devices

CO1: Todefinetheradiowavespectrum and microwave applications

CO2: Toexplainthe useofmicrowavecomponentsandtheirapplications

CO3: Tosurveythestructuralandoperationalcharacteristicsofmicrowavesalongwiththeir applications

CO4: Tocomparethebasicmicrowavedevicesandcircuits **CO5:**

To combine the microwave tubes and devices **Transmission Lines &Wave guides**

CO1: Discussthepropagationofsignals.

CO2: Analyzesignalsatradio frequencies

CO3: Connectdifferentwaveguidesand impedancematching devices

CO4: Explainradio propagationinguidedsystems.

CO5: Utilizecavityresonator.

OpticalFiberCommunication

CO1: Classifydifferentopticalfibersandwavepropagationthroughthem.

CO2: Characterize the luminance by and current through the devices.

CO3: Characterizetheilluminationonandcurrentthroughthedevices.

CO4: Combine two optical fibers.

CO5: Applytheiracquiredskillsetinvariousapplicationsoncivilandmilitary.

ElectronicInstrumentation

CO1: Understandthedifferenttypesofinstruments

CO2: Analyze different types of digital voltmeter

CO3: DemonstratetheCROindifferentconditions

CO4: Explain different types of Transducers.

CO5: Use DataAcquisitionand conversion

ManagementofModernOrganization

CO1: Toidentifyand interpretthevarious principlesandimportanceof management

CO2: Toexplainanddemonstrate theusesofplanningandorganizing
CO3: Toclassify andcombinethevarioustechniquesofcontroland coordination
CO4: Topointoutanddevelopthe essence ofmotivationanddirectionof thestudents
CO5: Tointerrelateandunderstandthe essenceofleadership andimportance of communication

Thermodynamics&Optics
CO1: Explainbasicconceptsof thermodynamics.
CO2: Designathermodynamic system.
CO3: Surveyonmicroscopic particles.
CO4: Analyzewave natureoflightanditscharacteristics.
CO5: Analyzewave natureoflightanditscharacteristics.

LinearControl Systems
CO1: Abletoanalysisof Transferfunction,block diagramreductiontechniques andSFG.
CO2: Analyze the different motors like servo motors.
CO3: Understandsthetimeresponseofdifferentsystems.
CO4: Analyze thestability of the systems.
CO5: Designdifferent functionspolarandbode plots.

MicroController&Embeddedsystems
CO1:Applyknowledgeanddemonstrateprogrammingproficiencyandinstructionsof microcontroller
CO2: Tointerfacevariousdevices–inputandoutputtointeractwithmicrocontrollerandstudy various operating systems
CO3: Explainblockdiagramof80286,Operationofvarioustypesof DMAtohaveefficient system design
CO4: Toanalyze howtimemanagementcanbedonetoaccomplishaworksothatscheduling can be done for various external interrupting devices
CO5: Toanalyzehowcompilationprocessisdone,distinguishbetweennative,crossprocessor along with processor and IO dependent.

ITHardwareand Networking
CO1: IdentifyPCComponentandvariousExpansionCards
CO2: Distinguish keyboard types, mouse and printers **CO3:**
Compare different HDD, DVD and SMPS
CO4: Showassemblyanddisassemblyof PC
CO5: Demonstratedifferentnetworking devices

ElectricalMachines
CO1: Studentwillbeabletoanalyzetheelectrical circuitswithhelpofKCLandKVL techniques.
CO2: Studentswillbeable toexplaintheoperationofDCgenerator andanalyze the

CharacteristicsofDC generator.

CO3: Student will be able to explain the principle of operation of DC motor and analyze their Characteristics.Acquiretheskillstoanalyzethestartingandspeedcontrolmethodsof DC motors.

CO4: Judgetodevelop equivalentcircuitand evaluateperformanceoftransformers.

CO5: Abilitytoidentifyspeed–torquecharacteristicsofinductionmotorandunderstand starting methods of induction motor.

IndustrialElectronics

CO1: Understand thedifferentpowerelectronics components.

CO2: Analyzethedifferentheating methods.

CO3: Designofdifferentinverters.

CO4: Analyzethedifferent rectifiers.

CO5: Abletounderstand thedifferentswitches.

Robotics

CO1: Apply the programming concepts of micro controllers**CO2:**Categorizevarioustypesofmotorsanddistinguishbet ween. **CO3:** Select an appropriate sensor to design their circuit

CO4: Designtheir project

CO5: Todevelopacommunicationlinkbetweentwoormore electronic modulesor systems.

B.Sc.FoodTechnologyandManagement

ProgramSpecificOutcomes:

Studentswillbeableto:

PSO1: UnderstandtheconceptofFoodTechnology andManagement

PSO2:Analysevariousfoodsafety laws ,regulationsandActs

PSO3:Applytheknowledgeofprocessingandpreservationtechniquesinincreasingtheshelflifeof food products

PSO4:Thinkcriticallyaboutmarketing andmanagementstrategiesrelated to food.

FoodChemistry

CO1:Evaluatethe importanceandroleofcarbohydrates infood.

CO2:Analyzethefunctionalpropertiesofproteinsinfood.

CO3: Explain the oxidative reactions of lipids in food

CO4: Classify the enzymes of importance in food

CO5:Evaluate the roleofwater infood

MicrobiologyOfFoodAndWater

CO1:Identifydifferentmicroorganismsassociatedwithfood

CO2:Evaluate themicrobialestimationinfood.

CO3:Analyzemicroorganismsassociated withvariousfood groups
CO4:Evaluatethe variousfoodpreservationtechniques.
CO5:Explainvariousfoodborne illnesses.

FoodSafety,QualityControlandSensoryEvaluation
CO1: Create Knowledge on various food hazards.
CO2:Evaluate theimportanceoffood lawsandacts.
CO3:Analyzequalityaspectsoffoodcommodities.
CO4:understandthesubjective andobjective testesofsensoryparameters.
CO5:Evaluate the roleofsanitationand hygiene infoodindustry.

Foodmicrobiologyandfoodsafety
CO1: Identify different microorganisms associated with food
CO2:Understandthefactorsaffectinggrowthofmicroorganisms.
CO3: Evaluate the microbial estimation in food.
CO4:CreateKnowledgeonvariousfoodhazards.
CO5:Analyzetherecentconcernsinfood safetyand newand emergingpathogens.

FoodBiochemistry
CO1: Evaluatevariousanalytical methods
CO2: Classifycarbohydrates anddifferentmetabolic pathways
CO3: Classifylipidsandfattyacidsandsynthesisoffattyacids
CO4: Distinguish transamination and deamination
CO5: Demonstrateprotein biosynthesis

TechnologyofFermentedFoodsandBeverages
CO1: Prepare various kinds of pickles
CO2: Preparedifferentorientalandtraditionalfermented foods
CO3: Differentiatenatural &artificialsugars,colours ,flavoursand preservatives
CO4: Classifyfruitbased,carbonated,synthetic beverages
CO5: Explainprocessofvariousalcoholic beverages

TechnologyofFruitsandVegetables
CO1: Explain processingmethods and role of F&V in human diet
CO2: TellaboutPostharvesthandlingmethodsandtreatmentsofF&V **CO3:**
Explain processof canning ,machinery and storage in foods **CO4:**
Prepare various products of F&V
CO5: Classifyfruitbeverages andmethodsof preservation

FoodandHumannutrition
CO1: Describethegeneralclassification,examples,deficiencies,functions of nutrients
CO2:Create various dietplansforvarious age groups
CO3: Analyzetheassessment ofnutritionalstatus

CO4: Comparedifferentinternationalagenciesinovercomingmalnutrition

FoodProcessingandPreservation

CO1:Createknowledgeonvariousfoodprocessingoperations
CO2: Explain about the technologies of colloids in foods
CO3: Create knowledge on water disposal and sanitation
CO4: Apply the minimal processing and hurdle technology
CO5: Pointoutthedifferentfoodadditivesandcontaminantsinfoods

TechnologyofFoodPreservation

CO1: Classifydifferentmicroorganisms basedonvarious factors
CO2: Categorize the changes occurring during low temperature preservation
CO3: Categorizethechangesoccurringduringhightemperaturepreservation **CO4:**
Explain the various factors affecting preservation by drying method **CO5:**
Apply various methods of food preservation using recent technologies

FoodProcessingandQualityControl (Geid)

CO1: Create knowledgeonvariousprincipleinfoodpreservation
CO2: Explainaboutthevariousprocessingmethods offruitsand vegetables
CO3: Explainaboutthevariousprocessingstepsinvolvedinchocolate manufacturing
CO4: Preparethevariousdairyproducts
CO5: Analyze thedifferentfoodsbyusingfoodlawsandregulations

TechnologyofOilsandFats

CO1: Explain composition and classification of fats and oils
CO2: Create knowledge on various characteristics of fats
CO3: Explainthevariousstepsinvolvedinprocessingoffats **CO4:**
Create value added products from fats
CO5: Toshowhowtoutilizetheby-productsfromoilrefiningindustries

FoodSupplyChainandManagement

CO1: Explainabouttheobjectives andfunctionsof SCM
CO2: Createknowledge onvaluechainandvaluedeliverysysteminSCM
CO3: Formulatingthesupplychainstrategy
CO4: Use thebestpracticesandbenchmarketing
CO5: Createthelogistics organizationforeffectivesupplychainmanagement

ExtrusionTechnology

CO1: Compare theadvantagesanddisadvantagesof extrusion
CO2: Designsingle and doublescrew extruder
CO3: Differentiate the chemical and nutritional changes occur in food during extrusion
CO4: Makethedifferentprocessingofsnackfoodsandanimalfoodsbyusingextrusion **CO5:**
Prepare the RTE cereals and texturized vegetable protein

SugarConfectionery

CO1:Compare thedifferenttypes ofsugarsandtheir properties.
CO2:Applythe usesofoils&fats, milkproducts,colorsandflavorsinconfectioneryitems.
CO3: To develop hard boiled sweets, toffee, caramel, fudge and cocoa chocolate.
CO4:Toproducegums&jellies,creampaste,liquoricepaste&aeratedconfectionery. **CO5**:
To produce tablets, lozenges, panned sweets, gums and cereal bars.

BakingScience& Technology

CO1:Toplantheingredientsusedinbreadmaking.
CO2: To develop bread making process.
CO3:Toproducedifferenttypesofbiscuits.
CO4: To construct the recipe for cakes.
CO5:To preparewafers, frozendough products andflatbreads.

FoodPackaging

CO1:Identify theimportance, functionsanddesign of packaging.
CO2:Classifythefoodpackagingmaterials.
CO3:Explain theflexiblepackagingmaterials andtheir properties
CO4:Evaluatethepackagingmaterial, packageperformance andpackagingequipment.
CO5:Compare therecenttrendsinpackaging.

Food Plant Sanitation & Waste Management

CO1:Planfoodplantlayoutandequipmentdesign
CO2: Evaluate food plant hygiene and sanitation
CO3: Classify the wastewater treatment systems
CO4:Differentiatethedifferentbiological treatmentsofwastewater
CO5:Explaintheutilizationof foodindustry wastes

B.Sc.ComputerScience&CloudComputing

ProgramSpecificOutcomes:

Studentswillbeableto:

PSO1: Become technology-oriented with the knowledge and ability to develop creative solutions, and better understandthe effectsoffuturedevelopmentsofcomputersystemsand technologyonpeopleandsocietyasa whole.
PSO2:Design cloud-basedsolutionsorarchitectureandusethepopularcloudplatformstodevelopanddeploy cloud applications.
PSO3:Providecomputer-basedsolutionsforreal-lifeproblemsbydevelopingspecificsoftwareproducts.**PSO4**: Design and develop highly scalable cloud-based applications by configuring virtual machines on the cloud.

GENERALENGLISH–I

CO1: Todistinguishbetweenwordswhichareeitherspeltorpronouncedalike,yetrenderdistinctmeanings; imparting a sound clarity on everyday usage of language, and for developing the art of parallel listening and writing.
C**O2:**Toconstructvocabularyandtogainunderstandingonthetensecomponent,apivotalconstituentfor language structuring and vocabulary building.
CO3: Toidentifywitheconomicalwordconstructions,payingspecificattentioninconstructingsoundwriting skills.
CO4: Tointerpretfunctionalgrammar,thebasicpartinvolvedinsentenceconstructingtoimprovelinguistic skills.
CO5:Todevelopcommunicationskillstoprovideaplatformforlanguageefficiencyforeffectivelanguage deliver.

VALUEEDUCATION

CO1: Differentiateacceptednormsandcountervaluesandtoidentifythevariousdimensionsof Human Development.
CO2: Demonstrate Love and Experience of God andidentify the Basic Issues of Life and Happiness as a life goal.
CO3: UnderstandtheimportanceofConcernforothersandcritique thevariousproblemsthatdeterthe growth of the society.
CO4: Recognizethetraitsofagoodpersonalityandpractice Selfexploration.
CO5: InterpretthePurposeofLifeandGoalSettinganddemonstrateSelf-management.

FUNDAMENTALSOFINFORMATIONTECHNOLOGY

CO1: Understandbasiccomputerterminologyandnumbersystems.
CO2:aboutoperatingsystems,anditstypes.
CO3: LearnabouttheapplicationsofInformationtechnology.
CO4: ImportanceofsystemdevelopmentandthephasesofSDLC
CO5: Useofmodernmeansofcommunications,typesofnetworksandtopologies

MATHEMATICS-I

CO1: Categorizethedifferentialequationswithrespecttotheirorderandlinearity.Solvedifferentialequations of first order using numerical and analytical methods such as Integrating Factors.
CO2: AnalyzeandSolvebasicapplicationproblemsdescribedbyfirstorderdifferentialequations.Such orthogonal trajectories.
CO3: SolvesecondorderHomogeneousEquationswithConstantCoefficients.Obtainexactandnumerical solutions using differential equations technology.
CO4: CombinethenecessaryLaplacetransformtechniquestosolvesecondorderordinarydifferentialequations. Solve the Laplace transform of standard functions.
CO5: AnalyzeaFourierseriesofagivenperiodicfunctionbyevaluatingFouriercoefficients

OPERATINGSYSTEMS

CO1: Explainfunctions,typesandstructuresofoperatingsystem
CO2: Analyzevariousprocessmanagementconceptsincludingschedulingandsynchronization
CO3: Illustratetheconceptsofmemorymanagementand I/Osystem.
CO4: Solveissuesrelatedtofilesysteminterface.
CO5: ChooseanappropriatePagereplacement algorithm.

PROBLEMSOLVING&PROGRAMMINGTHROUGHC

CO1: Understandthebasicintroductionofcomputerandprogramminglanguage.
CO2: Identify‘C’datatypes,operatorsanddatainput/outputfunctions.
CO3: Categorize‘C’controlstructures,arraysandstringconcept.
CO4: Explain‘C’function,recursion,pointersanddynamicmemoryallocation.
CO5: Expresstheconceptofstructures,unionand filehandlingin‘C’.

GENERALENGLISH–II

CO1: Toidentifyasoundunderstandingontheformationofwordsandtodemonstratethefunctional grammatical component in the sentence.
CO2: Toparaphraseideasandthoughtsinacoherent,neatandorganizedmannerinordertoutilize thewriting skills for sound writing propagandas
CO3: TocreateanunderstandingonIndianLiterature,alongsidetodevelopandchiseltheircommunicationskills.
CO4: Torecognizethemoralelementwhichunderliesintheshortstory;anexposuretoinformallanguage.
CO5: Todeveloplisteningandspeakingskillsthrougheffectivesentenceconstructionsandefficientdelivery.

INDIANHERITAGE& CULTURE

CO1: Understandbetteraboutthe originofancientIndianculturethe contributionsofgreatrulersfromboth north and south India for Indian culture in ancient days.

CO2: AnalysehowPersiancultureenteredintoIndia anditinfluencethe FineArtsofIndiansocietylikeClassical Music, Dance and Architecture.
CO3:Assesshowthe Indianorthodoxsocietyturninto modernandwesternsocietyinthe19thcentury.Italso edifies the students with spiritual doctrines of various Religions
CO4: Evaluatevariouschallengesfacebytheyouthandtheevilseffectsofterrorismonsociety.
CO5:Createbelongingnessamongthestudentsby bringingawarenessoftherightsanddutiestomakethe world a better place and it throw light on gender sensitization issues of women, Children and LGBT.

ITHARDWAREANDNETWORKING

CO1: Identify Motherboard and its components**CO2:**Explaintheworkingofvariousstorag edevices.**CO3:** Analyze the working of Power supply devices **CO4:** Identify different types of networking devices .**CO5:** Implement different types of Topologies.

MATHEMATICS-II(VECTORCALCULUS&MATRICES)

CO1: Applythevectordifferentialoperatortoscalarandvectorfunctions
CO2: Determinegradientvectorfieldsandfindpotentialfunctions.
CO3: Evaluateline,surface&volumeintegralsbyGreens,GaussandStoke'stheorems.
CO4: Understandtofindtherankofamatrixandtosolvesystemsoflinearequationsapplyingmatrix techniques.
CO5: Determineeigenvaluesandeigenvectorsofagivenmatrixandtoapplytheseconceptstoquadraticforms.

COMPUTERNETWORKS

CO1: Understandandidentifybasiccomputernetworktopologiesandprotocolsandexplaindata Communication System components.
CO2:DescribethefunctionsofeachlayerinOSImodelanditsprotocols
CO3: Classifydifferenterrordetectingtechniques
CO4: Buildskillsofsub-nettingandroutingmechanisms.
CO5: ClassifytheroutingprotocolsandanalyzehowtoassigntheIPaddressesforthegivennetwork.

DATASTRUCTURESTHROUGHC

CO1: Chooseappropriatedatastructurestorepresentdataitemsinrealworldproblems
CO2: Illustratenon-lineardatastructureslikelinkedlist.
CO3: Organizethedatausingsortinginvariouslineardatastructurescomplexity
CO4: Constructdatawithnonlineardatastructureusingtrees
CO5:Explaintheconceptofgraphsandbtrees

BSCCOMPUTERSCIENCE&INTERNETOFTHINGS

PROGRAMMESPECIFICOUTCOMES

PSO1: Applythefundamentalknowledgeofcomputerscienceandengineeringindevelopingeffectivesoftware for real world complex engineering problems by adapting advanced technologies
PSO2: Designandconfigurevariousinternetofthingsbasedsmartapplicationsusingcontemporaryhardware and software tools
PSO3: Abletoacquirethepracticalcompetencythroughemergingtechnologiesandopen-sourceplatforms related to the areas of IoT.
PSO4: DesignandimplementindustrialIoTbasedsolutionsforimprovingoperationalefficiencybyinvestigating existing industrial environment
PSO5: Abletoprovidediversifiedsolutionsinproductdevelopmentbyadheringtoethicalvaluesforthebenefit of society.

COURSEOUTCOMES:

GENERALENGLISH1

CO1: Todistinguishbetweenwordswhichareeitherspeltorpronouncedalike,yetrenderdistinctmeanings; imparting a sound clarity on everyday usage of language, and for developing the art of parallel listening and writing
CO2: Toconstructvocabularyandtogainunderstandingonthetensecomponent,apivotalconstituentfor language structuring and vocabulary building
CO3: Toidentifywitheconomicalwordconstructions,payingspecificattentioninconstructingsoundwriting skills
CO4::Tointerpretfunctionalgrammar,thebasicpartinvolvedinsentenceconstructingtoimprovelinguistic skill
CO5: Todevelopcommunicationskillstoprovideaplatformforlanguageefficiencyforeffectivelanguage delivery

VALUEEDUCATION&PERSONALITYDEVELOPMENT

CO1: DifferentiateacceptednormsandcountervaluesandtoidentifythevariousdimensionsofHuman Development
CO2::DemonstrateLoveandExperienceofGodandidentifytheBasicIssuesofLifeandHappinessasalifegoal. **CO3:** Understandtheimportanceof Concernforothers andcritique thevariousproblemsthatdeterthe growth of the society.
CO4: RecognizethetraitsofagoodpersonalityandpracticeSelf-exploration
CO5: InterpretthePurposeofLifeandGoalSettinganddemonstrateSelf-management

FUNDAMENTALSOFINFORMATIONTECHNOLOGY

CO1: Understandbasiccomputerterminologyandnumbersystems.
CO2:aboutoperatingsystems,anditstypes.
CO3: LearnabouttheapplicationsofInformationtechnology.
CO4: ImportanceofsystemdevelopmentandthephasesofSDLC
CO5: Useofmodernmeansofcommunications,typesofnetworksandtopologies

MATHEMATICSFOUNDATIONFORELECTRONICS

CO1: Categorizethedifferentialequationswithrespecttotheirorderandlinearity.Solvedifferentialequations of first order using numerical and analytical methods
CO2: AnalyzeandSolvedifferentialequationsoffirstorderbasicapplicationproblemsdescribedbyfirstorder differential equations, orthogonal trajectories.
CO3: SolvesecondorderHomogeneousEquationswithConstantCoefficients.Obtainexactandnumerical solutions using differential equations technology
CO4: Formulatethesolutionsetofasystemoflinearequa
CO5: Solvethecharacteristicpolynomial,eigenvectors,eigenvalues

BASICELECTRONICSANDCIRCUITS

CO1: Abletounderstandwhatiselectronicsandtermsrelatedt
CO2: Understandingthepassivecomponentsandtheirconnections,sources&laws
CO3: Understandingthefundamentalsofalternatingcurrentandterminology
CO4: Analyzesemiconductorsandunderstandtheworkingofadiodeanditsapplications
CO5: Abletounderstandtheconstructionandworkingoftransistor,powersupply

PROBLEMSOLVING&PROGRAMMINGTHROUGHC

CO1: Explainthebasicintroductionofcomputerandprogramminglanguages
CO2: Categorizedifferentdatatypes,operatorsanddatainput/outputfunctionsin 'C'
CO3: Developprogramsusing'C'controlstructures,arraysandstringconcept
CO4: Subdivideslargerproblemsintosmalleronesusing'C'functions
CO5: Createprogramsusingtheconceptofstructures,unionandfilehand

GENERALENGLISHII

CO1: Toidentifyasoundunderstandingontheformationofwordsandtodemonstratethefunctional grammatical component in the sentence.
CO2: Toparaphraseideasandthoughtsinacoherent,neatandorganizedmannerinordertoutilize thewriting skills for sound writing propagandas
CO3: Tocreateanunderstandingon IndianLiterature,alongsidetodevelopandchiseltheircommunicationskills.
CO4: Torecognizethemoralelementwhichunderliesintheshortstory;anexposuretoinformallanguage.
CO5: Todeveloplisteningandspeakingskillsthrougheffectivesentenceconstructionsandefficientdelivery.

INDIANHERITAGEAND CULTURE

CO1: StudentswillhaveknowledgeaboutIndianCus
CO2: StudentswillhaveknowledgeaboutIndianTraditions
CO3: Studentscanmakeuseofthesubjectknowledgetoattemptallkindsofcompetitiveexamsespeciallycivil service
CO4: The subject helps the students community to have knowledge of historical issues of the nation**CO5:**Thesubjecthelpsthestudentscommunitytohaveknowledgeofcontemporarysocial,religiousand political issues of the nation.

COMPUTERNETWORK

CO1: Identifybasiccomputernetworktopologiesandprotocolsandexplain DataCommunicationSystem components
CO2: Classifydifferenterrordetectingtechniques.
CO3: Constructsub-nettingandroutingmechanisms
CO4: SketchtheroutingprotocolsandanalyzehowtoassigntheIPaddressesforthegivennetwork
CO5: Developnetworkdesignandimplementation

VECTORCALUCLUSANDLAPLACETRANSFORMS

CO1: Categorizethevector-valuedfunctionsofarealvariableand theircurves,Gradientvectorfieldsand constructing potentials.
CO2: Analyzethedifferentialideasofdivergence,curlandtheLaplacianalongwiththeirphysicalinterpretations
CO3: UsetheapplicationofGreen'stheoremintheplane,GaussdivergencetheoremandStake'stheorem.
CO4: SolvetheLaplacetransformofstandardfunctionsfromthe definitions
CO5: CombinethenecessaryLaplacetransformtechniquestosolvesecond-orderordinarydifferentialequations

LOGICANDDIGITALCIRCUITS

CO1: Convertdifferenttypeofcodesand numbersystemswhichareusedindigitalcommunicationand computer systems.
CO2: Employ the codes and number systems converting circuits and Compare different types of logic families whicharethe basicunit ofdifferenttypesoflogicgatesinthe domainofeconomy,performanceandefficiency **CO3:** Analyze different types of digital electronic circuit using various mapping and logical tools and know the techniques to prepare the most simplified circuit using various mapping and mathematical methods.
CO4: Designdifferenttypesofwithmemoryelementdigitalelectroniccircuitsforparticularoperation,within the realm of economic, performance, efficiency, user friendly and environmental constraints
CO5: Assessthe nomenclatureandtechnologyinthe areaofmemorydevicesand applythememorydevicesin different types of digital circuits for real world application

C++ANDDATASTRUCTURES

CO1: Differentiatebetweenobject-orientedprogrammingandprocedure-orientedprogramming
CO2: Developprogramsusingobjectorientedprogrammingfeatures
CO3: Organizethedatausingsortingandvariouslineardatastructuresanddeterminethetimecomplexity
CO4: Illustratenon-lineardatastructuresliketrees,graphs
CO5: Chooseappropriatedatastructurestorepresentdataitemsinrealworldproblems

ProgrammeOutcomes–(B.Com/BBA)

PO1:BusinessandManagementKnowledge: Applytheindepthknowledgeacquiredin the Disciplines of Commerce, Business and Management, E-commerce, finance, accounting, auditing, marketing to solve complex problems in the business world.

PO2: Development of Business Solutions: Identify, formulate anddevelop solutions in different fields such as Banking, Insurance, and Finance. Core competencies can be gainedtoimpartskillsinAccounting,ManagementandLeadership,Communicationand overall personality development.

PO3:SolvingResearchProblems: UtilizeResearchMethodologyandProjectworktoinfer and interpret data in order to provide valid conclusions in business.

PO4:ModernBusinesstoolsandTechniques:explain,select,analyzeandapplyrelevant management techniques, resources, modern business tools, models and practices for holistic development of the learner.

PO5:TheManager,thebusinessman,theentrepreneurandtheSociety: Applycontextual and skill-based knowledge to identify the micro and macro factors which affect an organization.

PO6:Practicalexposures:identifyandequiplearnerstofacethemoderndaychallengesin Commerce and business.

PO7: Globalization and Ethics: Design and apply value based curriculum committed to Professionalethicsandresponsibilities,soastorenderglobalcitizenswithahuman touch.

B.ComHonours

ProgrammeSpecificOutcomes:

PSO1: Demonstrate theoretical cum practical knowledge gained in the study of Financial Management, Financial & Advanced Accounting. Corporate Accounting and Managementaccountingwhileutilizingprinciples,techniquesandmethodssuchas Standard Costing. Budgetary Control and Marginal Costing etc.

PSO2: Capability to analyze and demonstrate learning of tax laws and issues relating to individualsandfirms,therebyacquiringpracticalskillstoworkasanaccountant,tax accountant and a Chartered Accountant.

PSO3:AbilitytoacquireskillsinAuditing&Amp;Accountingstandards.BusinessLaws & Banking laws so as to implement them effectively in an organization and pursueadvance coursessuchasCA.CPA,ICWA.

FinancialAccounting-I

CO1: Describestheneedandimportance of accounting.

CO2: Explainsaboutsubdivisionofjournal

CO3: Comparesthecashbookand passbookbalancestoreconcilethe difference.

CO4: Analyses thefinancialpositionofanorganization

CO5: Identifiesthemistakesinbooksofaccountsandhelpsincorrectingthem.

PrinciplesofManagement

CO1: Toidentifyand interpretthevarious principlesandimportanceof management
CO2: Toexplainanddemonstrate theusesofplanningandorganizing
CO3: To classify and combine the various techniques of control and coordination.
CO4: Topointoutanddeveloptheessenceofmotivationanddirectiontothestudents **CO5:**
To interrelate and understand the essence of leadership and the importance of communication

FundamentalsofBusinessStatistics

CO1: Organize,manageandpresentdata.Canrepresentthestatisticaldataindiagrammatic and graphical form.
CO2: Calculatemeasuresofcentral tendency.
CO3: Analyse thedatausingmeasuresof dispersion.
CO4: Evaluatethenaturefor thestatisticaldatausingskewnessandmoments.
CO5: Determinetherelationbetweenanytwofactorsusingtheconceptsofcorrelationand regression analysis.

ManagerialEconomics

CO1: Understandthebasictermsandconceptsusedinthemanagerialeconomics
CO2: Appraisethebehaviourof consumersthroughthedemandandindifference analysis
CO3: Interpretthebehaviourofproducerthroughsupply,productionandotherrelated concepts
CO4: Differentiatethemarketformsandthepriceandoutputdeterminationundereachtype of market.
CO5: Infertheimpactofthemacro economic factors onthebusinessconcerns.

FinancialAccounting–II

CO1: IntroducesToThebasicconceptsofpartnershipandexplainstheadmissionofa partner.
CO2: Demonstrates theaccountingtreatmentrelatingtoretirementand deathofa partner.
CO3: Identifiestherulesapplicableforwindingupofpartnershipandinsolvencyofa partner.
CO4: Showsthemethodoffindingoutprofitsandfinancialpositionbyusingincomplete records.
CO5: Illustratesmethodofpreparingbooksunderhirepurchaseandinstalmentpurchase system

BankingTheoryandPractice

CO1: To identify and illustrate the origin and growth of banking in India.
CO2: To interpret the features of various types of negotiable instruments.
CO3: Todemonstrateandapplythestepsinvolvedinopeningabankaccount.
CO4: To appraise and criticize the various types of collateral securities and point out the precautionstobetakenbyabankerwhileadvancingloansagainstdifferenttypesof securities.
CO5:To understandthe organizationalstructureand functionsofco-operativebanks,Nabard

andRBI.

FundamentalsofBusinessMathematicsC

O1: To solve linear equations.
CO2: Togetsolutionsof reallifeproblemsbyusinglogarithmsandsettheory.
CO3: Tosolvetheproblemsinbusinesslinelikebanking sector.
CO4: Togetmaximumprofitandminimumlossincompanyproductivity.
CO5: Tomeasureareas&volumes

AdvancedStatistics

CO1: Derivetheprobabilitymassanddensityfunctionsofrandomvariablesandthento calculate mean and variance.
CO2: Identifythecharacteristicsofdifferentdiscretedistributionslikebinomial,poissonand negative binomial distributions.
CO3: Abletoperformandanalysehypothesistestsofmeans,proportionsandvariances using both one-and two-sample data sets.
CO4: Abletoapplytheappropriate chi-squaredtestforindependenceandgoodnessoffit.
CO5: Demonstrateunderstandingoftheconceptsoftimeseriesanditsapplicationsin different areas.

E-commerce

CO1: Explainthee-commerceapplications and frameworks.
CO2: Identify consumer oriented applications.
CO3: ExpressdifferencesbetweenEDIandmime.
CO4: Analyze corporate digital library
CO5: Surveythe consumersearchresources andinformation.

AdvancedAccounting

CO1. Statesvariousmethodsforpreparing branchaccounts.
CO2. Describestheallocationand interdepartmentaltransferof expenses.
CO3.Analysesthefinancialpositionofnon-tradingconcerns.
CO4.Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar,premium and forfeiture.
CO5.Explainsaboutsourcesoffundsthroughissueofdebenturesandvariousmethodsof redemption.

DirectTaxes

CO1: Tounderstandthebasicdefinitionsofincometax,agriculturalincome,residential status and exempted incomes.
CO2: Toshowthecomputationofincomefromtheheadsalariesandhousepropertyasperit act.
CO3: Toidentifytheincomefrombusiness,professionandcapitalgains.
CO4: Tocomputetotalincomeof individualsand huf.
CO5: Toassessthetax liabilityofindividualsand huf asperit act.

BusinessLaw

CO1:Demonstrate an understandingofthelegalenvironment ofthe business.
CO2:Explainslegalityofobjectandconsideration,dischargeofacontractandremedies available.
CO3:Identifytherecognitionoftransactionsinvolvingthesalesof goodsact.
CO4: Dramatizetheapplicationofconsumerprotectionact.
CO5:Torecognizeintellectual propertyrightsandintroductiontoitact2000andrightto information act.

EconomicEnvironmentofBusiness

CO1: Todescriber changingdimensionsofbusinessenvironment.
CO2: Selectkeymacroeconomicindicatorsanddifferentiatebetweeneconomicgrowthand development.
CO3: Toanalyse problemsandpoliciesofIndianindustries.
CO4: Tocomparemeritsand demeritsofforeign capital inIndianeconomy.
CO5: Tocombinevarious businessregulationsforeffectivecorporate governance.

CorporateAccounting

CO1: To understand the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofits before incorporation.
CO2: Explainsthevaluationof sharesandgoodwill.
CO3: Analysesamalgamationinthenatureofmergerandpurchaseandaccountingtreatment for internal reconstruction.
CO4: Demonstratestheaccountingsystemsofabankingcompanyunder theguidance ofrbi.
CO5: HelpstoprepareinsuranceaccountsasperIRDAI guidelines.

CompanyLaw

CO1:Todevelopbasicknowledge ofprovisionsofcompaniesact2013.
CO2:Todescribethecapitalstructureofcompanythroughissuesofsharesandalterationof share capital.
CO3:Explaintheborrowingpowersofacompanyandconsequencesofultravires borrowing.
CO4:Statevariousprovisionsofthecompaniesactrelatingtocompanymanagementand meetings.
CO5:Toidentifyvariousmodesofwindingupandlegalprovisionsapplicable.

IndirectTaxes

CO1: Todescribebasic schemeof GST,GSTcouncilpower andfunctions.
CO2: ToexplainvariousGSTactsandalsovariousdefinitions
CO3: Toidentifytheregistrationprocedure,levyingofGSTandexemptions
CO4: To analyse different types of assessments and returns under GST
CO5: To appraise the exim procedure as per customs legislations in India.

ResearchMethodology

CO1: Tounderstandandinterpretthebasicmeaningofresearch,todefine the research

problemat handand constructtheprocedure forundertakingresearch.
CO2: To formulatehypothesisanddevelop anappropriateresearchdesign.
CO3: Toclassifythedifferentsourcesofdataandanalyzethevariousmethodsofdata collection.
CO4: Todevelopthemostappropriatesamplesizeanddesignaswellasdeterminationof sampling and non-sampling errors.
CO5: Toclassifythevarioustypesofattitudemeasurementscalesandappliestheprinciples and format of report writing and presentation.

MarketingManagement
CO1: Explainstheconceptof marketingandsketches themarketingenvironment.
CO2: Classifiesthemarket andidentifiesthevarious marketsegments
CO3: Pointoutsthemarketingmixwithreferencetoproductandprice **CO4:**
Analyzes the promotion mix and the channels of distribution.
CO5: Explainsservicemarketingmixandpointsouttheimportanceofdirectandonline marketing.

AdvancedCorporate Accounting
CO1: Toexplainlegalprovisionsofholdingcompany'sunderscheduleiiiofcompaniesact and preparation of consolidated balance sheet.
CO2: Toshowthecapitalstructureofholdingcompanyandsubsidiarycompaniesand preparation of accounts relating to intercompany transaction.
CO3: Toanalysepublicutilitycompany'sdoubleaccountingsystem.
CO4: Todifferentiatebetweenoperating andfinancial lease.
CO5: Toappraisetheliquidationprocessofthecompanythroughpreparationofstatementof affairs, deficiency account, liquidated financial statement.

InternationalMarketingandExportManagement
CO1: Analyzetheprocessofinternationalmarkets andclassifyIndia'sexporttrade
CO2: Describetheimportantfactorsofinternationalmarketingenvironmentanddifferentiate marketing research, market selection, and market segmentation
CO3: Analyzetheimportanceof productanddistributionstrategies
CO4: Differentiatetheneedforpromotionmixstrategiesand pricingdecisions
CO5: Explainforeignexchangestrategies,differentiatebalanceofpaymentsandbalanceof trade, and interpret international economic organizations

CorporateGovernanceandBusiness Ethics
CO1: Identifyandexplaintheimportance ofvaluesand ethics.
CO2: Analyzeand interpretthevarioustheoriesofethicalvalue system.
CO3: Pointouttherelationshipbetweenlawandethicsandunderstandtheimpactoflawon the business.
CO4: Explainthecorporategovernance codes,transparencyanddisclosure inthe corporate.
CO5: Identifyandpointoutthe globalissuesof governance.

FinancialManagement–I

CO1: Tointerprettheconceptofbusinessfinance,financedecisionandfunctionsoffinance manager.
CO2:Tounderstandtheconceptofcapitalbudgetingandevaluatenpvandcashflowsfor investment analysis.
CO3: Toexplainthebasicconceptsofcost of capitalanditssignificance.
CO4: Todistinguishbetweenfinancialandoperatingleveragesandtoexplainthecapital structure theories.
CO5: Toappraisetheknowledge ondividendtheories.

CostingAccounting andControl–I

CO1: Tounderstandimportanceofcostaccountinginorganization.
CO2: Todescribetheprinciplesofmanaginginventoriesofmaterialsandtheproceduresfor accounting inventory.
CO3: Todescribe the principlesandpractice ofcostinglabourtoa business.
CO4: Todescribe theprinciplesandprocessofoverheadcostanalysis.
CO5: Toapplytheoperationof processcostingmethods.

AccountingforManagement–I

CO1: Toexplainan overview ofmanagementaccounting,itsneed, scope and functions.
CO2: Toprepare thefinancialstatementsandshowitsanalysisandinterpretation.
CO3: Toapplydifferentformulainratioanalysis.
CO4:Toillustratethepreparationoffundsflow statement.
CO5: Toillustratethepreparation ofcashflow statement.

FinancialMarketsandInstitutions

CO1: Toclassify aboutfinancialmarketsandservices.
CO2:Toexplainaboutthecapitalmarketswithreferencetostockmarketasper SEBI regulations.
CO3: Tosketch theworkingofmoneymarket intheIndianfinancialsystem.
CO4: Toanalysethederivatory and depositorysystem.
CO5: Toappraisefinancialservicesystem relatingtomutualfundsandmerchantbanking.

HumanResourceManagement

CO1: Tounderstand theconceptofHRM,functionsand changingrole ofaHRmanager
CO2: Todistinguishbetweenthevariousmethodsofjobdesignandinterpretthetechniques of acquisition of human resource.
CO3:ToexplaintheimportanceofHRPandpointoutthevariousHRDapproachesforwork life balance and describe the concept of job evaluation.
CO4: Toanalysethecoreconceptsof HRD,TQMandunderstandtheconceptofcareer development.
CO5: Toexplainthe variousconceptsofworker'sparticipationandqualityof worklife.

AccountingforManagement–II

CO1: Tofind/understandtherelationamongcost,volume&profit
CO2: Enable thestudentstoprepare variouskindsofbudgets.
CO3: Tosolvelinearprogrammingproblems, transportationproblems.
CO4: Tounderstandresponsibilityaccounting,humanresourceaccounting&inflation accounting.
CO5: Tocreateandwritethevariousreportstoprovidetherequiredinformationfor management.

LabourLaw
CO1: Tounderstandvariousprovisionsoffactoriesact.
CO2: To explain the rules regarding workmen compensation and provident fund act.
CO3: Toillustratethegrossprofitsofabankingcompanyandnon-bankingcompany. **CO4:**
To show various adjudication machinery.
CO5: Tellsaboutrights,dutiesandliabilitiesofregistered trade unions.

FinancialManagement–II
CO1: Toshowtheworkingcapitalmanagementof anorganization.
CO2: Todemonstratevarioustechniquesofinventorymanagementandreceivables management.
CO3: Topreparecashbudgetaspartof cashmanagement.
CO4: Toanalysesecurityand portfoliomanagement.
CO5: Toappraisemergers andacquisitionsforrestructuringof corporation.

CostingAccounting andControl–II
CO1: To distinguish between service costing, job costing and batch costing systems.
CO2: Topreparecontractaccountswithreferencetolongtermandcontinuousprojects. **CO3:**
To show the preparation of process accounts.
CO4: Tocomparevariances betweenstandard costandactual cost
CO5: Todeveloptenders andquotations

AuditingandAccounting Standards
CO1: To understand the basic concepts of auditing and the nature and scope of auditing.
CO2: Toorganizethevariousstepsinanauditingprocessandpointoutthetechniquesof vouching of cash payments and receipts.
CO3: To analyzethefeaturesandimportanceofinternalcontrol, check andaudit.
CO4: Topreparedifferenttypesofauditreportsandexplaintheprocedureforappointment and removal of a company auditor.
CO5: Tounderstandtheregulatoryframeworkinwhichaccountingstandardsareformulatedand operated

B.ComAdvertisementSalesPromotionandSalesManagement

ProgrammeSpecificOutcomes

PSO1: Understand thenatureandbasicconceptsofAccountsandMarketing,andhow effectively helpful to the business organizations.
PSO2. Analyzetherelationshipbetweenbusinessandsociety, andthevariouswaysbusiness

respondtosocio-political-religious andeconomicfactors.
PSO3. Applybasic philosophiesand toolsofmarketingmanagement
PSO4. Measuretheapplicationofvariousmanagement accountingtoolsindecisionmaking.

CourseOutcomes

FinancialAccounting–I
CO1: Describestheneedandimportance of accounting.
CO2: Explainsaboutsubdivisionofjournal
CO3: Comparesthecashbookand passbookbalancesto reconcilethe difference.
CO4: Analysesthefinancialpositionofanorganization
CO5: Identifiesthemistakesinbooksofaccountsandhelpsincorrectingthem.

BusinessEconomics
CO1: Understandthebasictermsandconceptsusedinthemanagerialeconomics
CO2: Appraise the behaviour of consumers through the demand and indifference analysis**CO3:**Interpretthebehaviourofproducerthroughsupply,productionandotherrelatedconcepts **CO4:** Differentiate the market forms and the price and output determination under each type of
market.
CO5: Infer theimpactof themacro economic factors onthebusinessconcerns.

FinancialAccounting–II
CO1: Introducestothebasicconceptsof partnership andexplainstheadmissionofa partner.
CO2: Demonstrates the accounting treatment relating to retirement and death of a partner.**CO3:** Identifies the rules applicable for winding up of partnership and insolvency of a partner. **CO4:**Showsthemethodoffindingoutprofitsandfinancialpositionbyusingincomplete records.
CO5: IllustratesmethodofpreparingbooksunderHirepurchaseandinstalmentpurchase system

AdvancedAccounting
CO1: Statesvariousmethodsforpreparing branchaccounts.
CO2: Describestheallocation andinterdepartmentaltransferof expenses.
CO3:Analysesthefinancialpositionofnon-tradingconcerns.
CO4:Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar,premium and forfeiture.
CO5:Explainsaboutsourcesoffundsthroughissueofdebenturesandvariousmethodsof redemption.

BusinessLaw
CO1: Demonstrate anunderstandingofthelegalenvironment ofthe business.
CO2:Explainslegalityofobjectandconsideration,dischargeofacontractandremedies available.

CO3:Identifytherecognitionof transactionsinvolvingthesalesof goodsact.
CO4:Dramatizetheapplicationofconsumerprotectionact.
CO5:Torecognizeintellectualpropertyrightsandintroductionto ITact2000andrightto information act.

CorporateAccounting

CO1: Understands the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofitsbefore incorporation.
CO2: Explainsthevaluationof sharesandgoodwill.
CO3: Analysesamalgamationinthenatureofmergerandpurchaseandaccountingtreatment for internal reconstruction.
CO4: Demonstrates theaccounting systemsofabankingcompanyundertheguidanceofRBI.
CO5: HelpstoprepareinsuranceaccountsasperIRDAI guidelines.

MarketingManagement

CO1: Explainstheconceptofmarketing andsketches themarketingenvironment.
CO2: Classifiesthemarketand identifiesthevarious marketsegments
CO3: Pointoutsthemarketingmixwithreferencetoproductandprice **CO4:**
Analyzes the promotion mix and the channels of distribution.
CO5: Explainsservicemarketingmixandpointsouttheimportanceofdirectandonline marketing.

FinancialManagement

CO1: Tointerprettheconceptofbusinessfinance,financedecisionandfunctionsoffinance manager.
CO2:Tounderstandtheconceptofcapitalbudgetingandevaluate NPVandCashFlowsfor investment analysis.
CO3: Toexplainthebasicconceptsofcost of capitalandits significance.
CO4: Todistinguishbetweenfinancialandoperatingleveragesandtoexplainthecapital structure theories.
CO5: Toappraisetheknowledge ondividend theories.

CostingAccounting

CO1: Tounderstandimportanceofcostaccountinginorganization.
CO2: Todescribetheprinciplesofmanaginginventoriesofmaterialsandtheproceduresfor accounting inventory.
CO3: Todescribe theprinciplesandpracticeof costinglabour toa business.
CO4: Todescribe theprinciplesandprocessofoverheadcostanalysis.
CO5: Toapplytheoperationofprocesscosting methods.

FinancialStatementAnalysis

CO1: Toexplainan overviewofmanagementaccounting, Itsneed,Scopeandfunctions.
CO2: Topreparethefinancialstatementsandshowitsanalysisandinterpretationandtoapply different formula in ratio analysis.
CO3:Toillustratethepreparationoffundsflow statement.
CO4: Toillustratethepreparationof cashflow statement.
CO5: Tofind/understandtherelationamongcost,volume&profitandenablethestudents to prepare various kinds of budgets.

HumanResourceManagement
CO1: TounderstandtheconceptofHRM,functionsandchangingrole ofaHRmanager
CO2: Todistinguishbetweenthevariousmethodsofjobdesignandinterpretthetechniquesof acquisition of human resource.
CO3:ToexplaintheimportanceofHRPandpointoutthevariousHRDapproachesforcareer planning and development and describe the concept of Performance evaluation and workers participation in management.
CO4: Toanalyzethecore conceptsofInternationalHRMandunderstandtheaspectsofE- HRM.
CO5. ToexplainthevariousconceptsofKnowledgeManagementandroleofleaderin organization

B.Com.BusinessStudies

ProgrammeSpecificOutcomes
PSO1:Appraisethemulti-dimensionalbusinesssituationsandassessthefinancialhealthof companies by understanding and applying the wide knowledge of accounting, technical and analytical skills obtained from various core courses such as Financial Accounting, FinancialManagement, Business Statistics, Business Economics, International Business etc.
PSO2: Develop problem solving skills, technical skills, leadership skills, communication skillsandinterpersonalskillssoastoenablethemtoestablishand/ormanage their business effectively.
PSO3:Integrateknowledge,skillandattitudethatwillsustainanenvironmentoflearning, creativity and ethics among the students and also make them good citizens with excellent professional attitude in the corporate world.
PSO4:Createbettersolutionstotheproblemsinthefieldofcommercebyadvancing research in Finance, Marketing, and Human Resources etc.

BusinessEnglish–I
CO1:Studentswillbe abletoidentifyelements,formsandstyle of letters.
CO2:Theywillbeabletocreate quotationsrelatedtoinviting,sendingandplacingorders.
CO3:Studentswillbe able toidentifyqualitiesandfunctionsofasalesletter.
CO4:Studentswillbeable touse theformatof asales letter.
CO5: Theywillalsobeabletounderstandandwritethefunctions,structureandtypesof memorandum.

CO6:Studentswillbeable tounderstand anddesignanotice,agenda andminutes.
CO7:Theywillbeabletodemonstratetheguidelinesforansweringandmakingeffective telephone calls.
CO8:Theywillbeable tounderstandandimplementnote making.
CO9:Studentswillusethestrategiesforreadingcomprehensionandrecognizetheaspectsof efficient training.
CO10:Theywillalsohaveabetterunderstandingofscanningandproofreadingincomprehension.

IndianHeritageandCulture
CO1:TounderstandbetteraboutheoriginofancientIndianculture andthecontributionsof great rulers from both north and south India for Indian culture in ancient days.
CO2:ToindicatehowPersian culture entered intoIndiaanditsinfluence.
CO3:ToexpresshowIndianorthodoxsocietyturnintomodernandwesternlifestylein19th century.
CO4:Topointoutthevariouschallengesfacedbytheyouthof Indiansociety,theevilsof terrorism and its impact on society.
CO5:To identifyandexpressvariousgenderissueslikewomen rights andLGBTissues.

BusinessEconomics
CO1:Todemonstrateunderstanding ofconceptsofbusinessenvironment.
CO2:Toapplydifferentmethodsofdemandforecastingbasedontimeperiodandnatureof product.
CO3:To analyzedifferenttypesofproductionfunction
CO4:Toidentifyvariousmarketstructuresandanalyzeprice-outputdecisionindifferent markets
CO5:Toanalyzeimportanceofinternationaltradeto Indianeconomyandevaluateeffectsof government policy on trade.

FundamentalsofIT
CO1:Understandbasiccomputerterminologyand numbersystems.
CO2:Explain aboutoperatingsystems, and itstypes.
CO3:Identify differentapplicationsofinformation technology
CO4:Classifyphases ofsoftwaredevelopmentlife cycle
CO5:Categorizemodernmeans ofcommunications,typesofnetworks andtopologies

FinancialAccounting–I
CO1:Todescribetheneedandimportanceofaccountingandinferthevariousprinciplesof accounting
CO2:Explainaboutsubdivisionsofjournal.
CO3:Compare cashbookandpassbookbalancesandreconcilethe differences.
CO4:Toanalyze thefinancialpositionof anorganization
CO5:To identifythemistakesinbooksofaccountsandrectifyingthem

BusinessOrganization
CO1:Tointerpretthe fundamentalconceptsofbusinessand classifythefeaturesof trade,

industryandcommerce.

CO2.Toidentifythevariouscharacteristicsandfunctionsofanentrepreneur.

CO3.Todistinguishandsubdividethevariousformsofbusinessorganization.

CO4.Toappraise,criticizeandcomparetheadvantages,disadvantagesandsuitabilityofsole proprietorship and partnership form of business organization.

CO5.Toplan,combineandorganizethevariousstagesinvolvedintheformationofajoint stock company.

BusinessEnglish–II

CO1:Studentswillbe able toidentifythe elementsofclaimandadjustmentletters.

CO2:Studentswillalso beable todraftclaimlettersandadjustmentletters.

CO3:Theywillbeable toidentifynature andtypesofcreditletters.

CO4: Studentswillbeable torecognizetoneandstyle ofcollectionletters.

CO5:Studentswillcomprehendthegeneralguidelinestowriteapplicationlettersand resumes.

CO6:Theywillalsobeabletoexecutetheformandcontentofanapplicationletterand resume.

CO7:Studentswillalsobeabletounderstandcharacteristicsandimportanceofbusiness reports.

CO8:Theywillalsobeable toprepare agoodbusinessreport.

CO9:Studentswillbeabletounderstandthetechniquesofdescribingmachinesand mechanisms.

CO10:They willalsobeabletodescribeandcreate good technicalreports.

ValueEducationandPersonality Development

CO1:Studentswillbe able toidentifyacceptednormsandcounter values.

CO2:Theywillbeabletodifferentiatethevariousdimensionsofhuman development.

CO3:Studentswillbe able todemonstrate loveandexperienceofgod.

CO4:Theywillbeable toidentifythebasicissuesoflife andhappinessasalifegoal.

CO5:Theywillabletounderstandtheimportanceofconcernfor others.

CO6:Theywillabletocritiquethevariousproblemsthatdeterthegrowthofthe society.

CO7:The studentswillbeabletorecognizethetraitsofa goodpersonality.

CO8:They willbeable identifytheir personalitybyself-exploration.

CO9: Studentswillbeable tointerpretthe purposeoflife andgoalsetting.

CO10: They willbeable tolearnself-management.

FundamentalsofBusinessMathematics

CO1:Constructalgebraicmodelsandusethequadraticformulatodescribereal-life situations. Be able to decide what type of model fits the situation best:

CO2: Analyzeanduselinearmodelstoanswerquestionsaboutthesituationstheyrepresent knowledge including the mathematical notation and terminology used in matrices**.**

CO3:Constructmathematicalexpressionsthatinvolvematricesandlinearsystemsoflinear equations.

CO4: Apply index laws to simplify and evaluate arithmetic expressions. Understand particulartypesofsequencescalledarithmeticprogressionandalsofindarithmetic mean (am) between two given numbers.

CO5:Solvebyconvertingthelogarithmicequationstoexponentialequations.Evaluatethe impact of compound interest on simple financial decisions.

BusinessStatistics–I

CO1: Organize,manageandpresentdata.Understandthemeritsandlimitationsinusingthe statistical data.

CO2: Representthe statisticaldataintheform ofdiagrams and graphs.

CO3: Analyzestatisticaldatausingmeasuresofcentraltendency.

CO4: Comparethe homogeneity of the statistical data using different methods of dispersion.

CO5: Identifythesymmetricandnatureofthestatisticaldatausingtheconceptsofskewnessand moments.

FinancialAccounting–II

CO1:Toexplainthebasic conceptsofpartnershipandtheadmissionof partner.

CO2:To demonstratethe accountingtreatmentrelatingtoretirementanddeath of partner.

CO3:Toidentifytherulesapplicableforwindingupofapartnershipandinsolvencyof partner.

CO4:Toshowthemethodsoffindingouttheprofitsandfinancialpositionbyusing incomplete records.

CO5: Illustratemethodsof preparingbooksunderhire purchaseandinstalmentsystem.

PrinciplesofManagement

CO1: Toidentifyand interpretthevarious principlesandimportanceof management.

CO2: To explain and demonstrate the importance of planning and organizing.

CO3:Toclassifyandcombinethevarioustechniquesofcontrolandcoordination.

Co4.Topointanddevelop theessence ofmotivationanddirectiontothestudents.

Co5. Tointerrelate theessenceofleadershipand theimportance of communication.

Banking

CO1: To identify and illustrate the origin and growth of banking in India.

CO2: To interpret the features of various types of negotiable instruments.

CO3:Todemonstrateandapplythestepsinvolvedinopeningabankaccount.

CO4: To appraise and criticize the various types of collateral securities and point out the precautionstobetakenbyabankerwhileadvancingloansagainstdifferenttypesof securities.
CO5:Tounderstandtheorganizationalstructureandfunctionsofco-operativebanks,nabard and RBI.

CorporateGovernanceandBusiness Ethics

CO1:Toidentifyandexplaintheimportance of valuesandethics
CO2:To analyzeandinterpretthevarious theoriesofethical value system.
CO3:Topointouttherelationshipbetweenlawandethicsandunderstandtheimpactoflaw on business.
CO4:Toexplainthevariouscorporategovernancecodes,transparencyanddisclosureinthe corporate
CO5:Toidentifyandpointoutthe global issuesof governance.

BusinessStatistics–II

CO1: Interpretthecorrelationbetween twovariables.
CO2: Applythe principles of linear regression and correlation, including least square method,predictingaparticularvalueofyforagivenvalueofxandsignificanceofthe correlation coefficient.
CO3: Planthefuture eventsusingtheconceptsoftimeseriesanalysis.
CO4: Selecttheappropriateindexnumbers andcalculatesindicesfromgiven data.
CO5: Compareandanalyzethedifferentsamplingtechniqueslikesimple,stratifiedandsystematic sampling.

AdvancedAccounting

CO1: Statethevariousmethodsfor preparingbranchaccounts.
CO2:Describetheallocation andinterdepartmentaltransferofexpenses.
CO3:Analyzethefinancialpositionofnon-tradingconcerns.
CO4: Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar, premium and forfeiture.
CO5:Explainaboutsourcesoffundsthroughissueofdebenturesandvariousmethodsof redemption.

BankingTheory& Practice

CO1: To identify and illustrate the origin and growth of banking in India.
CO2: To interpret the features of various types of negotiable instruments.
CO3:Todemonstrateandapplythestepsinvolvedinopeningabankaccount.
CO4: To appraise and criticize the various types of collateral securities and point out the precautionstobetakenbyabankerwhileadvancingloansagainstdifferenttypesof securities.
CO5.Tounderstandtheorganizationalstructureandfunctionsofco-operativebanks,Nabard and RBI.

Directtaxes

CO1:Tounderstandthebasicdefinitionsofincometax,agriculturalincome,residential status and exempted incomes.

CO2:Toshowthecomputationofincomefromtheheadsalariesandhousepropertyasper IT act.

CO3:Toidentifytheincomefrombusiness, professionandcapitalgains.

CO4:Tocomputetotalincomeofindividualsand huf.

CO5:Toassessthetaxliabilityof individualsandhufasper ITact.

EnvironmentalStudiesandGender Sensitization

CO1:Understandtheimportanceofenvironmentaleducation,conservationofnatural resources & understand the importance of ecosystems and biodiversity

CO1:Understandthepollutionproblemsandapplytheenvironmentalscienceknowledgeon solid waste management, disaster management

CO3: Applytheenvironmental science knowledgetoimprovethe resources Evaluateandunderstand thesustainableenvironmental conditionsand controlmethods

CO4: Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class,sexuality,andsoon)andassessthewaysinwhichtheycontributetoinstancesof privilege and power dynamics across cultures, space, and time. And their problems

CO5: Understand the gender problems and ways of addressing them, includinginteractions across local to global scales in communities and overcome inequalities with legislations

CorporateAccounting

CO1: To understand the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofits before incorporation.

CO2: Explainthevaluationof sharesandgoodwill.

CO3:Analyzeamalgamationinthenatureofmergerandpurchaseandaccountingtreatment for internal reconstruction.

CO4:Demonstrate theaccountingsystemsof abankingcompanyunder theguidance of RBI.

CO5: Toprepareinsurance accountsasperIRDAI guidelines.

FinancialServicesandMarkets

CO1: Toexplainandanalyzethevariousfunctionsandimportanceof Indianfinancial system.

CO2: Toclassifycapitalmarketandassesstherationalcontentandcurrentreformstocapital market regulations

CO3: Toanalyzethefeaturesofmoneymarketandlistoutthevariousmoneymarket instruments

CO4: Toidentifyandinterprettheservicesprovidedbyamerchantbanker.

CO5: Toexplaintheprocessofsecuritizationofdebtandcompare thevarioustypesof financial derivatives

IndirectTaxes

CO1: Todescribebasic schemeof GST,GSTcouncilpower andfunctions.

CO2: ToexplainvariousGSTactsandalsovariousdefinitions
CO3: Toidentifytheregistrationprocedure,levyingofGSTandexemptions
CO4: To analyze different types of assessments and returns under GST
CO5: To tell the GST network, GST suvida providers and GST ecosystem.

BusinessLaw
CO1:Demonstrate an understandingofthelegalenvironment ofthe business.
CO2: Explainslegalityofobjectandconsideration,dischargeofacontractandremedies available.
CO3:Identifytherecognitionoftransactionsinvolvingthesalesof goodsact.
CO4:Dramatizetheapplicationofconsumerprotectionact.
CO5:Torecognizeintellectual propertyrightsandintroductiontoitact2000andrightto information act.

ResearchMethodology
CO1: Tounderstandandinterpretthebasicmeaningofresearch,todefinetheresearch problem at hand and construct the procedure for undertaking research.
CO2: Toformulatehypothesisanddevelop anappropriateresearchdesign.
CO3: Toclassifythedifferentsourcesofdataandanalyzethevariousmethodsofdata collection.
CO4: Todevelopthemostappropriatesamplesizeanddesignaswellasdeterminationof sampling and non-sampling errors.
CO5: Toclassifythevarioustypesofattitudemeasurementscalesandappliestheprinciples and format of report writing and presentation.

InternationalBusiness
CO1: Explaintheoverviewofinternationalbusinessanddemonstratetheenvironmentof international business.
CO2: Explainaboutthevariousformsof traderegulationandintegration.
CO3:Sketchthevariousmodesofentering theinternationalmarket.
CO4: Pointouttheconceptualframeworkofe-businessandpolicyframeworkforglobalE- business.
CO5: Analyzetheinterculturalcommunicationontheglobalperspective.

PublicRelationandCorporateCommunication
CO1:Tounderstandtheimportanceofapositiveattitudeandways tobuildapositive attitude.
CO2:Toapplythevariousprinciplesandtechniquesoftimemanagementandstress management.
CO3: To point out and demonstrate the various methods of enhancing creativity.
CO4:Todemonstratecommunicationandsoftskillsanddevelopmatterforspeech. **CO5**:
To choose the right career and identify the pathway to a successful career.

HumanResourceManagement

CO1: TounderstandtheconceptofHRM,functionsandchangingrole ofanHRmanager.
CO2:Todistinguishbetweenthevariousmethodsofjobdesignandinterpretthetechniques of acquisition of human resource.
CO3:Todemonstrateandclassifythemethodsoftrainingandmotivatinghumanresources in an organization.
CO4:To analyze thevariousaspectsofe-HRM.
CO5:Topointoutand appraise therecenttrendsin HRM.

FinancialManagement

CO1: Tointerprettheconceptofbusinessfinance,financedecisionandfunctionsoffinance manager.
CO2:Abletounderstandtheconceptofcostofcapitalandleveragesandcalculatethecostof capital and leverages of a business concern
CO3: Tointerprettheconceptofcapitalbudgetandwillbeabletoapplythetechniquesof ARR, NPV, IRR, PI etc.
CO4: Tounderstandtheconceptofworkingcapitalmanagementandapplytheconceptand able to determine working capital requirement of a business organization.
CO5: Tointerprettheconceptofcashmanagementandcashbudgetingandreceivables management.

CostAccounting-I

CO1: Tounderstandthebasicsofcost,scope,methodsof costing.
CO2: Toexplaintheprinciplesofmanaginginventory, costaccountofmaterials,procedure for accounting inventory.
CO3: Todescribe the principlesandpractice oflabourcosttoa business.
CO4: Todescribethe principlesandprocedures ofoverhead costanalysis.
CO5: Toexplaintheneedforreconciliationoffinancialandcostaccounting,costcontrol and reduction.

EntrepreneurshipDevelopment

CO1: Understand thenature andbasicconceptofentrepreneurandentrepreneurship.
CO2: Demonstratetheknowledgeofentrepreneurshipdevelopmentprogrammes
CO3:Recognisetheneed forprojectreport andanalyzetheconceptsofprojectformulation
CO4:Interpretfactorydesignandfactorylayoutandidentifytheimportanceof standardization and quality control
CO5:Differentiatesmallandlargescaleindustriesandidentifythereasonsforsicknessof small scale industries

MarketingManagement

CO1:Explainsthe concept ofmarketingand sketchesthemarketingenvironment.
CO2:Classifythemarketingenvironmentandidentifythevariousforcesoperatinginthe marketing environment.
CO3:Pointoutthemarketingmixwithreference toproductandprice.

CO4:Analyzethepromotionmixandthechannelsof distribution.
CO5:Toformulatetheservicemarketingmixandpointsouttheimportanceofdirectand online marketing.

AuditingandAccounting Standards
CO1:Tounderstandthe basicconceptsofauditingandthenature andscope ofauditing.
CO2:Toorganizethevariousstepsinanauditingprocessandpointoutthetechniquesof vouching of cash payments and receipts.
CO3: Toanalyzethefeaturesandimportanceofinternalcontrol,checkandaudit.
CO4:Topreparedifferenttypesofauditreportsandexplaintheprocedureforappointment and removal of a company auditor.
CO5:Tounderstandtheregulatoryframeworkinwhichaccountingstandardsareformulated and operated.

CompanyLaw
CO1:Todevelopbasicknowledge ofprovisionsofcompaniesact2013
CO2:Todescribethecapitalstructureofcompanythroughissueofsharesandalterationof share capital.
CO3:Toexplaintheborrowingpowersofacompanyandconsequencesofultravires borrowings.
CO4: Tostatethevariousprovisionsofthecompaniesactrelatingtocompanymanagement and meetings.
CO5:Toidentifyvariousmodesofwindingupandlegalprovisionsapplicable.

InternationalMarketingandExportManagement
CO1:To analyzetheprocessofinternationalmarketingand classifyindia'sexporttrade.
CO2:Todescribetheimportantfactorsofinternationalmarketingenvironmentdifferentiate marketing research, market selection and market segmentation.
CO3:Analyzetheimportanceofproductionand distributionstrategies.
CO4:Differentiatetheneedforpromotionmixstrategies andpricingdecisions.
CO5:Explainforeignexchangestrategies,differentiatebalanceofpaymentsbalanceoftrade and interpret international economic organizations.

PrinciplesofInsurance
CO1:Tounderstandthevariousconceptsofinsurance andriskmanagement
CO2:Toexplaintheroleofinsuranceineconomicdevelopmentanddistinguishbetweenlife and non-life insurance.
CO3:Toanalyzetheneedandbehaviourofinsurancecustomersandunderstandtheconcept of pooling in insurance.
CO4: Toappraiseandcriticizethevariousinsuranceplansandproductsavailableinthe insurance market.
CO5:To classifydifferenttypesoffinanciallosses andprinciples.

E-Commerce

CO1:Describeelectroniccommerceframeworkand wwwarchitecture.
CO2: Classify mercantile process models and types of electronic payment systems.**CO3**:ApplyEDIimplementationsandanalyzeintraorganizationalelectroniccommerce. **CO4**: Design corporate digital library, advertising and marketing on the internet.
CO5:Identifyconsumersearchandresourcediscovery,ondemandeducationanddigitalcopy rights.

FinancialStatementAnalysis

CO1:Todescribetheroleofmanagementaccountinginformationinmanagerialplanning and decision making
CO2:Toprepareandinterpretthecomparativeandcommonsizestatementsandratio analysis
CO3:Toanalyze fundsflow andtopreparethe fundflow statement
CO4:To analyze cash flowandpreparecash flow statement
CO5:To developan understandingofbudgetarycontrolmethods.

CostAccounting-II

CO1:Todistinguishbetweenservicecosting,jobcostingandbatchcosting. **CO2**: To prepare cost sheet with reference to long term continuous project. **CO3**: To prepare process costing account.
CO4:To comparevarianceinstandard andactualcost.
CO5:To developtenders and quotations.

B.ComComputers

ProgrammeSpecificOutcomes:

Studentswillbeableto:

PSO1: Understandtheroleof differentbusinessorganizationsanditschallenges
PSO2: Demonstrateaccountingskillsforbusinessandserviceorientedactivitiesand interpret the results to various users
PSO3: Analyzetheimportanceofvariousdisciplinesofcommerce–finance,marketing,auditing, management etc.
PSO4: Appraiseproblemsolvingtechniques through computersforbusiness solutions
PSO5: Createandempowerstudentswithprogressiveattitudetopursuehighereducationand research

BusinessEconomics

CO1: Demonstrateunderstandingof concepts ofbusinesseconomics.
CO2: Applydifferentmethodsof demandforecastingbased ontimeperiodandnature of

product.

CO3: Analyzedifferenttypesofproduction function

CO4: Comparevariousmarketstructuresandanalyzeprice-outputdecisionindifferent markets

CO5. AnalyzeimportanceofinternationaltradetoIndianeconomyandevaluateeffectsof government policy on trade

FinancialAccounting–I

CO1: Describethe need andimportance of accounting.

CO2: Explainaboutsubdivisionofjournal

CO3: Compare thecashbookandpassbookbalancestoreconcile the difference.

CO4: Analyze thefinancialpositionof an organization

CO5: Identifythemistakesinbooksof accounts andhelpsincorrectingthem.

BusinessOrganisationandManagement

CO1: Identify andinterpret thevariousprinciples andimportanceof management

CO2: Explainanddemonstrate the usesofplanningandorganizing

CO3: Classify and combine the various techniques of control and coordination.

CO4: Pointoutanddeveloptheessenceofmotivationanddirectiontothestudents **CO5:**
Interrelate and understand the essence of leadership and the importance of communication

FundamentalsofInformation Technology

CO1: Understand basiccomputerterminology andnumbersystems

CO2: Explainaboutoperatingsystems, anditstypes.

CO3: Identify differentapplicationsofinformation technology

CO4: Classifyphasesofsoftwaredevelopment life cycle

CO5: Comparemodernmeansof communications,typesofnetworks andtopologies

IndianEconomy

CO1. ExplainbasiccharacteristicsofIndianeconomy

CO2. IllustratethecontributionofagriculturesectortoIndia'sdevelopment

CO3. To explain impact of new economic reforms in Indian economy**CO4.**
To compare types of unemployment and identify causes of inflation. **CO5.**
To critically evaluate the impact of foreign investment in India.

BusinessMathematics

CO1. Toapplyvariousconceptsofquadraticequations tofindsolutionofreallifeproblems

CO2. Evaluatedifferentideaoflogarithmstosimplifymultiplicationanddivisionof numbers

CO3. Classifydifferenttypesofmatricesandprocedurestofindsolutionofreallifeproblems

CO4. Describethetheoreticalconceptsof differentiations

CO5: Identifythedifferentiationconcepttofindmaximumprofitandminimumlossin business process

FinancialAccounting–II

CO1: Introduce basic conceptsofpartnershipandexplainsthe admissionofa partner.
CO2: Demonstrateaccountingtreatmentrelating toretirementanddeathofa partner.
CO3: Identify the rules applicable for winding up of partnership and insolvency of a partner.
CO4: Showthemethodoffindingoutprofitsandfinancialpositionbyusingincompleterecords. **CO5:** Illustrate method of preparing books under hire purchase and installment purchase system

Programmingin'C'

CO1: Describethe structureof 'c' program
CO2: Analyzetheapplicationofcontrolsstructuresandarrays
CO3: Classify the types of functions and storage classes
CO4: Applypointers to enhance program efficiency
CO5: Evaluatethefile system

BusinessStatistics

CO1: Explainthestatisticalterminologyandconsider theoptionsfordesigninga sample.
CO2: Representthestatisticaldataindiagrammaticandgraphicalform.
CO3: Identifythedifferentstatisticaltechniquesused tocalculatethedescriptivestatistics.
CO4: Analyzetherelationbetweenanytwofactorsusingtheconceptsofcorrelationand regression analysis
CO5: Planthefutureeventsusingtheconceptsoftimeseriesanalysisandalsotodetermine the valueofmoney,inflationanddeflation

AdvancedAccounting

CO1: Statevariousmethodsfor preparingbranchaccounts.
CO2: Describetheallocationandinterdepartmental transferof expenses.
CO3:Analyzethefinancialpositionofnon-tradingconcerns.
CO4:Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar,premium and forfeiture.
CO5:Explainaboutsourcesoffundsthroughissueofdebenturesandvariousmethodsof redemption.

BusinessLaw

CO1:Demonstrate an understandingofthelegalenvironment ofthe business.
CO2:Explainlegalityofobjectandconsideration,dischargeofacontractandremedies available.
CO3:Identifytherecognitionoftransactionsinvolvingthesalesof goodsact.
CO4:Dramatizetheapplicationofconsumerprotectionact.
CO5:Recognizeintellectualpropertyrightsandintroductiontoitact2000andrightto information act.

DirectTaxes

CO1: Understandthebasicdefinitionsofincometax,agriculturalincome,residentialstatus and exempted incomes.

CO2: Showthecomputationofincomefromtheheadsalariesandhousepropertyasperit act.

CO3: Identify theincomefrombusiness, professionandcapitalgains.

CO4: Computetotalincomeofindividualsand huf.

CO5: Assessthetaxliabilityofindividualsandhufasperit act.

ObjectOrientedProgrammingthrough'C++'

CO1: Describethe conceptsof objectorientedprogramming

CO2: Applycontrolstructures towriteprograms forapplicationdevelopment

CO3: Differentiatethetypesof constructors

CO4: Demonstratepolymorphismandtypes ofinheritance

CO5: Evaluate theconceptoftemplatesandfiles

EnvironmentalStudiesandGender Sensitization

CO1: Understandtheimportanceofenvironmentaleducation,conservationofnatural resources & understand the importance of ecosystems and biodiversity

CO2: Understandthepollutionproblemsandapplytheenvironmentalscienceknowledgeon solid waste management, disaster management

CO3: Applytheenvironmentalscienceknowledgetoimprovetheresources,evaluateand understand the sustainable environmental conditions and control methods

CO4: Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class,sexuality,andsoon)andassessthewaysinwhichtheycontributetoinstancesof privilege and power dynamics across cultures, space, and time. And their problems

CO5: Understand the gender problems and ways of addressing them, includinginteractions across local to global scales in communities and overcome inequalities with legislations

ResearchMethodology

CO1: Understandandinterpretthebasicmeaningofresearch,todefinetheresearchproblem at hand and construct the procedure for undertaking research.

CO2: Formulatehypothesisanddevelop anappropriateresearchdesign.

CO3: Classifythedifferentsourcesofdataandanalyzethevariousmethodsofdata collection.

CO4: Developthemostappropriatesamplesizeanddesignaswellasdeterminationof sampling and non-sampling errors.

CO5: Classifythevarioustypesofattitudemeasurementscalesandappliestheprinciplesand format of report writing and presentation.

CorporateAccounting

CO1: Understand the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofits before incorporation.

CO2: Explainthevaluationof sharesandgoodwill.
CO3: Analyzeamalgamationinthenatureofmergerandpurchaseandaccountingtreatment for internal reconstruction.
CO4: Demonstrate theaccountingsystemsofabankingcompanyundertheguidance ofrbi.
CO5: Helptoprepare insuranceaccountsasper irdaiguidelines.

BankingTheoryandPractice
CO1: Identify and illustrate the origin and growth of banking in India.
CO2: Interpret the features of various types of negotiable instruments.
CO3: Demonstrateandapplythestepsinvolvedinopeningabankaccount.
CO4: Appraise and criticize the various types of collateral securities and point out the precautionstobetakenbyabankerwhileadvancingloansagainstdifferenttypesof securities.
CO5: Understandtheorganizationalstructureandfunctionsofco-operativebanks,Nabard and RBI.

IndirectTaxes
CO1: Describebasicscheme ofGST,GSTcouncilpower andfunctions.
CO2: ExplainvariousGSTacts andalsovariousdefinitions
CO3: Identifytheregistrationprocedure,levyingofGSTandexemptions
CO4: Analyze different types of assessments and returns under GST
CO5: Tell theGSTnetwork, GSTsuvidaproviders and GSTeco system.

Indirecttaxes
Co1. Describebasicschemeof GST,GSTcouncilpower andfunctions.
Co2. ExplainvariousGSTacts andalsovariousdefinitions
Co3. Identifytheregistrationprocedure,levyingofGSTandexemptions **Co4.** Analyze different types of assessments and returns under GST **Co5.** Tell theGSTnetwork, GSTsuvidaproviders and GSTeco system.

DatabaseManagementSystem
CO1: Understanddatabase design using e-r diagrams
CO2: Classifynormalization and relational algebra
CO3: Create database tables to implement queries
CO4: Analyzeprocedurallanguagesandstoragemedia
CO5: Evaluatetransactions and its recovery system

MarketingManagement
CO1: Explaintheconceptofmarketing andsketches themarketingenvironment.
CO2: Classify the market and identifies the various market segments
CO3: Pointoutthemarketingmixwithreferencetoproductandprice **CO4:** Analyze the promotion mix and the channels of distribution.
CO5: Explainservicemarketingmixandpointsouttheimportanceofdirectandonline marketing.

InternationalBusiness

CO1: Explaintheoverviewofinternationalbusinessanddemonstratetheenvironmentof international business.

CO2: Explainaboutthevariousformsof traderegulationandintegration.

CO3: Sketchthevariousmodesofentering theinternationalmarket.

CO4: Pointouttheconceptualframeworkofe-businessandpolicyframeworkforglobale- business.

CO5: Analyzetheinterculturalcommunicationontheglobalperspective.

HumanResourceManagement

CO1: UnderstandtheconceptofHRM,functionsandchangingrole ofa HRmanager

CO2: Distinguishbetweenthevariousmethodsofjobdesignandinterpretthetechniquesof acquisition of human resource.

CO3:ExplaintheimportanceofHRPandpointoutthevariousHRDapproachesforwork life balance and describe the concept of job evaluation.

CO4: AnalyzethecoreconceptsofHRD,TQMandunderstandtheconceptofcareer development.

CO5: Explainthevarious conceptsofworker'sparticipationandqualityofworklife.

CorporateGovernanceandBusiness Ethics

CO1: Identifyandexplaintheimportance ofvaluesand ethics.

CO2: Analyzeand interpretthevarioustheoriesofethicalvalue system.

CO3: Pointouttherelationshipbetweenlawandethicsandunderstandtheimpactoflawon the business.

CO4: Explainthecorporategovernance codes,transparencyanddisclosure inthe corporate.

CO5: Identifyandpointoutthe globalissuesof governance.

FinancialManagement

CO1: Interprettheconceptofbusinessfinance,financedecisionandfunctionsoffinance manager.

CO2:Understand theconceptofcapitalbudgetingandevaluateNPVandcashflowsfor investment analysis.

CO3: Explainthebasic conceptsofcostofcapitalanditssignificance.

CO4: Distinguishbetweenfinancialandoperatingleveragesandtoexplainthecapital structure theories.

CO5: Appraise theknowledge ondividendtheories.

Cost Accounting

CO1: Understandimportanceofcostaccountinginorganization.

CO2: Describetheprinciplesofmanaginginventoriesofmaterialsandtheproceduresfor accounting inventory.

CO3: Describethe principlesandpracticeofcostinglabourtoabusiness.

CO4: Describethe principlesandprocessofoverheadcostanalysis.

CO5: Toapplytheoperationof processcosting methods

E-Commerce

CO1: Understand the framework for web applications
CO2: Classify the consumer oriented applications and electronic payment systems
CO3: Evaluate the role of internal commerce and impact of advertising
CO4: Appraise digital libraries in information search and discovery
CO5: Analyze technological components, digital copyrights and mobile commerce

Java

CO1: Write java programs and differentiate between object-oriented programming and procedure-oriented programming.
CO2: Apply object-oriented programming features for solving a given problem.
CO3: Create packages and interfaces mechanisms.
CO4: Analyze exception-handling, threads and applets
CO5: Create interactive GUI programs using AWT package.

Auditing and Accounting Standards

CO1: Understand the basic concepts of auditing and the nature and scope of auditing.
CO2: Organize the various steps in an auditing process and point out the techniques of vouching of cash payments and receipts.
CO3: Analyze the features and importance of internal control, check and audit.
CO4: Prepare different types of audit reports and explain the procedure for appointment and removal of a company auditor.
CO5: Understand the regulatory framework in which accounting standards are formulated and operated.

Company Law

CO1: Develop basic knowledge of provisions of companies' act 2013.
CO2: Describe the capital structure of company through issues of shares and alteration of share capital.
CO3: Explain the borrowing powers of a company and consequences of ultra-vires borrowing.
CO4: State various provisions of the companies act relating to company management and meetings.
CO5: Identify various modes of winding up and legal provisions applicable.

System Analysis and Design

CO1: Demonstrate an understanding of the importance of system development environment
CO2: Interrelate the appropriate data flow diagram methodology
CO3: Apply the concepts of designing interfaces and dialogs
CO4: Differentiate between client servers and file server architecture
CO5: Analyze object oriented methods and different UML diagrams

Management Information Systems

CO1: Understand the overview of management information systems
CO2: Describe the is framework and its types and its strategic uses
CO3: Sketch the systems development processes
CO4: Appraise the management challenges – security and processing

CO5: Classifybusinessapplicationsofinformation technology

EntrepreneurshipDevelopment

CO1: Understand thenature andbasicconceptofentrepreneurandentrepreneurship.
CO2: Demonstratetheknowledgeofentrepreneurshipdevelopmentprogrammes
CO3: Recognisetheneedforprojectreport andanalyzetheconceptsofprojectformulation
CO4: Interpretfactorydesignandfactorylayoutandidentifytheimportanceof standardization and quality control
CO5: Differentiatesmallandlargescaleindustriesandidentifythereasonsforsicknessof small scale industries

FinancialStatementandAnalysis

CO1: Describetheroleofmanagementaccountinginformationinmanagerialplanningand decision making
CO2: Prepareand interpretthecomparativeandcommonsizestatementsandratioanalysis
CO3: Toanalyzefundsflowand toprepare thefundflow statement
CO4: Analyzecash flowand preparecash flow statement
CO5: Develop anunderstandingofbudgetarycontrolmethods.

WebProgramming

CO1: Describethe structureof htmlandvarioustags
CO2: Applystylesheetstowebpages
CO3: ApplyJavaScripttowrite programs
CO4: Categorizeanddistinguish objectsinJavaScript
CO5: Appraise xmlandXSL

B.Com(InformationSysterms)

PROGRAMMESPECIFICOUTCOMES

PSO1. Understandtheroleofdifferentbusinessorganizationsanditschallenges
PSO2. Demonstrateaccountingskillsforbusinessandservice-orientedactivitiesandinterpretthe results to various users
PSO3. AnalyzetheimportanceofvariousdisciplinesofCommerce&Informationsystems-Finance, Marketing, Auditing, Management, Programming etc.
PSO4. Appraiseproblemsolvingtechniques throughInformationSystemsforbusiness solutions
PSO5. Create and empower studentswithprogressiveattitudetopursuehighereducationandresearch

COURSEOUTCOMES

BusinessEnglish-I

CO1: Studentswillbeabletoidentifyelements,formsandstyleoflettersandwillbeabletocreate quotations related to inviting, sending and placing orders.

CO2: Studentswillbeabletoidentifyqualitiesandfunctionsofa SalesLetterinordertoenablethemto use the format of a Sales Letter.
CO3: Understandandwritethefunctions,structureandtypesofMemorandums, and design a notice, agenda and minutes
CO4: Demonstratetheguidelinesforansweringandmakingeffectivetelephonecallsinordertoenable, understand and implement Note making
CO5: Haveabetterunderstandingofscanningandproof-reading incomprehension.

IndianHeritageandCulture

CO1: The student can understand better about the origin of ancient Indian culture and the contributions of great rulers from both north and south India for Indian culture in ancient days.
CO2: StudentswillanalyzehowPersianculture enteredintoIndiaandhowitinfluencedtheFineArtsof Indian society like Classical Music, Dance and Architecture
CO3: Students are able to assess how the Indian orthodox society turned into modern and western society in the 19th century. It also edifies the students with spiritual doctrines of various Religions.
CO4: Studentswillevaluatevariouschallengesfacedbytheyouthandtheevileffectsofterrorismon society
CO5: Thetopicsintheunitcreatebelongingnessamongthestudentsbybringingawarenessoftherights and duties to make the world a better place and it throws light on gender sensitization issues of women, Children and LGBT.

BusinessOrganization&Management

CO1: Identifyandinterpret thevariousprinciples andimportanceofmanagement.
CO2: Explainanddemonstratethe usesofplanningandorganizing.
CO3: Classifyandcombine thevarioustechniques ofcontrolandcoordination.
CO4: Pointoutanddeveloptheessence of motivationanddirectiontothe students.
CO5: Interrelateandunderstand theessenceofleadershipandtheimportanceof communication

FinancialAccounting-I

CO1:Describetheneedandimportanceofaccounting.
CO2:Explainaboutsubdivisionof journals.
CO3:Comparethecashbookandpassbookbalancestoreconcilethedifference.
CO4:Analyzethefinancialpositionofanorganization.
CO5:Identifythemistakesinbooksofaccountsandhelpincorrectingthem.

MicroEconomics

CO1:Demonstrateunderstandingofconceptsofbusinesseconomics
CO2:Applydifferentmethodsofdemandforecastingbasedontimeperiodandnatureof product.
CO3:Analyzedifferenttypesofproductionfunction.

CO4:Comparevariousmarketstructuresandanalyzepriceoutputdecisionsindifferentmarkets.
CO5:Analyzetheimportanceofinternationaltrade tothe Indianeconomyandevaluate effectsofgovernment policy on trade.

FundamentalsofInformationTechnology

CO1:Understandbasiccomputerterminologyandnumbersystems.
CO2:Explainaboutoperatingsystems,anditstypes.
CO3:IdentifydifferentapplicationsofInformationtechnology
CO4:ClassifyphasesofSoftwareDevelopmentLifeCycle.
CO5:Comparemodernmeansofcommunications,typesofnetworksandtopologies

BusinessOrganization&Management(PRACTICAL)

CO1:Thestudentswillgainknowledgeaboutdifferentformsoforganizationandvariousmanagementconcepts & theories.

FinancialAccounting-I(PRACTICAL)

CO1:Todeveloptheskillsofrecordingfinancialtransactionsandpreparationofreportsusingcomputers.

FundamentalsofInformationTechnology(PRACTICAL)

CO1:Studentswillbeabletocreatedocuments,analyzespreadsheetdata,preparepowerpresentationsand maintain databases.

BusinessEnglish-II

CO1:StudentswillbeabletoidentifytheelementsofClaimandAdjustmentlettersanddraftthem.
CO2:StudentswillbeabletoidentifynatureandtypesofcreditlettersandCollectionletters.
CO3:StudentswillbeabletowriteApplicationlettersandResume.
CO4:Studentswillbeabletounderstandcharacteristicsand importanceofBusinessReportsandpreparea good business report.
CO5:StudentswillbeabletounderstandtechniquesofdescribingMachinesandMechanismsandcreate good TechnicalReports.

ValueEducationandPersonality Development

CO1:Studentswillbeabletodifferentiate AcceptednormsandCountervaluesandbe abletoidentifythe various Dimensions of Human Development.
CO2:StudentswillbeabletodemonstrateLoveandExperienceofGodandidentifytheBasicIssuesofLifeand Happiness as a life goal.

CO3:Theywillbe abletounderstandtheimportanceofConcernforothersandcritiquethevariousproblems that deter the growth of the society.
CO4:ThestudentswillbeabletorecognizethetraitsofagoodpersonalityandpracticeSelf-exploration.
CO5:StudentswillbeabletointerpretthePurposeofLifeandGoalSettinganddemonstrateSelf-management.

CompanyLaw-I

CO1:Demonstrateanunderstandingofthelegalenvironmentofthebusiness.
CO2:Explainslegalityofobjectandconsideration,dischargeofacontractandremediesavailable.
CO3:Identifytherecognitionoftransactionsinvolvingthesalesofgoodsact.
CO4:Dramatizetheapplicationoftheconsumerprotectionact.
CO5:Torecognizeintellectualpropertyrightsandintroductiontoolact2000andrighttoinformation act.

FinancialAccounting-II

CO1:Introduce basic concepts of partnership and explains the admission of a partner.
CO2:Demonstrate accounting treatment relating to retirement and death of a partner.
CO3:Identifytherulesapplicableforwindingupofpartnershipandinsolvencyofapartner
CO4:Showthemethodoffindingoutprofitsandfinancialpositionbyusingincompleterecords.
CO5:Illustratemethodofpreparingbooksunderhirepurchaseandinstallmentpurchase system.

E-Commerce

CO1:Understandtheframeworkforwebapplications.
CO2:Classifytheconsumer-orientedapplicationsandelectronicpaymentsystems
CO3:Evaluatetheroleofinternalcommerceandimpactofadvertising
CO4:Appraisedigitallibrariesininformationsearchanddiscovery
CO5:Analyzetechnologicalcomponents,digitalcopyrightsandmobilecommerce.

Programmingin‘C’

CO1:Describethestructureofthe‘C’program.
CO2:Analyzetheapplicationofcontrolsstructuresandarrays.
CO3:Classifythetypesoffunctionsandstorageclasses
CO4:Apply pointers to enhance program efficiency
CO5:Evaluate the file system.

CompanyLaw-I(PRACTICALS)

CO1:Todemonstrateanunderstandingofthelegalenvironmentofthebusiness

FinancialAccounting-II(PRACTICAL)

CO1:Studentswillbeabletorecordtransactionsrelatingtopartnershipfirmsusingcomputers.

Programmingin'C'(PRACTICAL)

CO1:Studentswillbeabletoapplytheproblem-solvingtechniquesindeveloping,compilingandexecuting correct programs with increased efficiency.

BBA

Programmespecificoutcomes:

PSO1: Understandthe importance of teamwork and group dynamics in achieving organizationalgoalsanddemonstrateabilitytoworkeffectivelyasateam.
PSO2: Analyzethedynamicsoftheorganizationalconflict,variousleadershipstylesandtheir execution.
PSO3: Thinkcritically ofdiverseglobalperspectivesandchallenges ofglobalbusiness.
PSO4: Applytheknowledgeofentrepreneurship,finance,marketing,HR,andcomputer- based information systems to business operations.

CourseOutcomes

FundamentalsofInformation Technology
CO1: Understand basiccomputerterminology andnumbersystems.
CO2: Identify differentoperatingsystems,andits types.
CO3: Classifydifferentapplicationsofinformation technology
CO4: Analysetheimportanceofsystem developmentand thephasesof SDLC
CO5: Categorizemodernmeansofcommunications,typesofnetworksandtopologies.

BankingTheory& Practice
CO1: Identifyandillustratetheoriginandgrowthof bankinginIndia
CO2: Demonstrate andapplythe stepsinvolvedinopeningvarioustypesofbankaccounts

CO3: Appraise and criticize the various types of collateral securities and point out the precautionstobetakenbyabankerwhileadvancingloansagainstdifferenttypesof securities
CO4: Understandthefunctionsandorganizationalstructureofcooperativebanks,Nabard and RBI.
CO5: Interpretthefeaturesofvarious types ofnegotiable instruments.

FinancialAccounting-I
CO1: Describethe need andimportance of accounting.
CO2: Explainaboutsubdivisionofjournal
CO3: Compare thecashbookandpassbookbalancestoreconcile the difference.
CO4: Analyze thefinancialpositionof an organization
CO5: Identifythemistakesinbooksof accounts andhelpsincorrectingthem.

PrinciplesofManagement
CO1: Identify andinterpret thevariousprinciples andimportanceof management
CO2: Explainanddemonstrate the usesofplanningandorganizing
CO3: Classifyandcombinethevarioustechniques ofcontrolandcoordination.
CO4: Identifytheessence ofmotivationand direction
CO5: Interrelateandunderstandtheessenceofleadershipandtheimportanceof communication

FundamentalsofBusinessStatistics
CO1: Organize,manageandpresentdata.Canrepresentthestatisticaldataindiagrammatic and graphical form
CO2: Calculatemeasuresofcentral tendency.
CO3: Analyze thedata usingmeasuresof dispersion.
CO4: Evaluatethenaturefor thestatisticaldatausingskewnessandmoments.
CO5: Determinetherelationbetweenanytwofactorsusingtheconceptsofcorrelationand regression analysis

CorporateGovernance&Business Ethics
CO1: Identifyandexplaintheimportance ofvaluesand ethics.
CO2: Analyzeand interpretthevarioustheoriesofethicalvalue system.
CO3: Pointouttherelationshipbetweenlawandethicsandunderstandtheimpactoflawon the business.
CO4: Explainthecorporategovernance codes,transparencyanddisclosure inthe corporate.
CO5: Identifyandpointoutthe globalissuesof governance.

FinancialAccounting-II

CO1: Explain the basic concepts of partnership and explain the admission of a partner.
CO2: Demonstrate the accounting treatment relating to retirement and death of a partner.
CO3: Identifytherulesapplicableforwindingupofpartnershipandinsolvencyofapartner.
CO4: Showthemethodoffindingoutprofitsandfinancialpositionbyusingincomplete records.
CO5: Illustratemethodof preparingbooksunder hirepurchaseandinstalmentpurchase system

ManagerialEconomics
CO1: Understandthebasic termsandconceptsusedinthemanagerialeconomics
CO2: Appraisethebehaviourof consumersthroughthedemand andindifference analysis
CO3: Interpretthebehaviourofproducer throughsupply,productionandotherrelatedconcepts.
CO4: Differentiatethe marketformsandtheprice and outputdeterminationunder eachtype of market.
CO5: Infer theimpactofthemacroeconomic factors onthebusinessconcerns.

PrinciplesofManagement
CO1: Identify andinterpret thevariousprinciples andimportanceof management
CO2: Explainanddemonstrate the usesofplanningandorganizing
CO3: Classifyandcombinethevarioustechniques ofcontrolandcoordination.
CO4: Identifytheessence ofmotivationand direction
CO5: Interrelateandunderstandtheessenceofleadershipandtheimportanceof communication

Taxation
CO1: Explaintherole,needoftaxandgiveknowledge abouttaxationsysteminindia.
CO2: Explainvarioussourcesofincometaxanddeterminesincometaxpayableon individual salary, income from house property.
CO3: Analyze andprepareover allcalculationoftaxliabilityof individual.
CO4: Describethe assessment,roleof incometax.
CO5: Describeabout indirecttaxandroleofg.s.t,itsmeaning,features,historyandrole.

FundamentalsofBusinessMathematics
CO1: Usethequadraticformulatofindallrealsolutions.Computethediscriminantandstate the number and type of solutions.
CO2: Performstandardoperationswithmatricesincludingaddition,scalarmultiplication,and multiplication. Compute the inverse of a matrix.
CO3: Understand particular types of sequences called arithmetic progression, geometric progressionandalsofindarithmeticmean(a.m),geometricmean(g.m)betweentwo given numbers.
CO4: Understandtheideaofdifferentiationfromfirstprinciples-differentiatepower functions.
CO5: Learnaboutintegrationandaboutsomeofthecommontechniquesemployed toobtain integrals. Interpret distinction between a definite and an indefinite integral.

ResearchMethodology

CO1: Understandandinterpretthebasicmeaningofresearch,todefinetheresearchproblem at hand and construct the procedure for undertaking research.

CO2: Formulatehypothesisanddevelop anappropriateresearchdesign.

CO3: Classifythedifferentsourcesofdata andanalyzethevariousmethodsofdata collection.

CO4: Developthemostappropriatesamplesizeanddesignaswellasdeterminationof sampling and non-sampling errors.

CO5: Classifythevarioustypesofattitudemeasurementscalesandappliestheprinciplesand format of report writing and presentation.

AdvancedAccounting

CO1: Statevariousmethodsfor preparingbranchaccounts.

CO2: Describetheallocationandinterdepartmental transferof expenses.

CO3: Analysethefinancial positionofnon-tradingconcerns.

CO4: Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar,premium and forfeiture.

CO5: Explainaboutsourcesoffundsthroughissueofdebenturesandvariousmethodsof redemption.

MacroBusiness Environment

CO1: Defineand explainprocessofcalculatingnationalincome.

CO2: Describecircular flowofincomethrough varioussectors of economy.

CO3: Illustratemeaningofinflationandidentifydifferentkindofinflation,causesandeffects of inflation of different sectors of economy.

CO4: Appraisetheimportanceofplanningundertakenbygovernmentof Indiaandeconomic reforms adopted by government.

CO5: Developunderstandingtowardsroleofforeigninvestmentindevelopmentof Indian industries.

E-Commerce

CO1: Explainelectroniccommerceframeworkand wwwarchitecture.

CO2: Selectmercantileprocessmodelsandtypes ofelectronicpaymentsystems.

CO3: ApplyEDIimplementationsandanalyzeintraorganizationalelectroniccommerce

CO4: Designcorporatedigital library,advertisingand marketingontheinternet.

CO5: Identifyconsumersearchandresourcediscovery,ondemandeducationanddigital copy rights.

CorporateAccounting

CO1: Understand the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofits before incorporation.

CO2: Explainthevaluationof sharesandgoodwill.

CO3: Analyse amalgamation in the nature of merger and purchase and accounting treatment for internal reconstruction.
CO4: Demonstrate the accounting systems of a banking company under the guidance of RBI.
CO5: Analyze insurance accounts as per irdai guidelines.

Financial Management

CO1: Interpret the concept of business finance, finance decision and functions of finance manager.
CO2: Understand the concept of cost of capital and leverages and calculate the cost of capital and leverages of a business concern.
CO3: Interpret the concept of capital budget and will be able to apply the techniques of ARR, NPV, IRR, PI etc.
CO4: Understand the concept of working capital management and apply the concept and able to determine working capital requirement of a business organization.
CO5: Interpret the concept of cash management and cash budgeting and receivable management.

Marketing Management

CO1: Explain the concept of marketing and sketches the marketing environment.
CO2: Classify the market and identify the various market segments.
CO3: Point out the marketing mix with reference to product and price. **CO4:**
Analyze the promotion mix and the channels of distribution.
CO5: Explain service marketing mix and points out the importance of direct and online marketing.

Human Resource Management

CO1: Understand the concept of HRM, functions and changing role of a HR manager
CO2: Distinguish between the various methods of job design and interpret the techniques of acquisition of human resource.
CO3: Explain the importance of HRP and point out the various HRD approaches for work life balance and describe the concept of job evaluation.
CO4: Analyse the core concepts of HRD, TQM and understand the concept of career development.
CO5: Explain the various concepts of worker's participation and quality of work life.

International Business

CO1: Explain the overview of international business and demonstrate the environment of international business.
CO2: Explain about the various forms of trade regulation and integration.

CO3: Sketch the various modes of entering the international market.
CO4: Point out the conceptual framework of e-business and policy framework for global e- business.
CO5: Analyze the intercultural communication on the global perspective.

Leadership & Change Management

CO1: Recognize the qualities of a leader, analyze various leadership theories and illustrate the different leadership styles.
CO2: Analyze the forces of change and interpret the techniques of change management.
CO3: Classify the various types of organizational change.
CO4: Point out the reasons for resistance to organizational change and recognize the methods of overcoming resistance.
CO5: Develop the most suitable plan for successful implementation and organization of change in an organization.

Quantitative Techniques

CO1: Understand the characteristics of different types of decision-making environments and the appropriate decision making approaches and tools to be used in each type.
CO2: Build and solve transportation models. Analyze the cases of unequal supply and demand, unacceptable routes, and maximization objective for a transportation problem.
CO3: Understand the mathematical tools that are needed to solve optimization problems, and be familiar with the special features of the trans-shipment problem.
CO4: Design new simple models, like: CPM, PERT to improve decision–making and develop critical thinking and objective analysis of decision problems
CO5: Understand the terminology & nomenclature appropriate queuing theory, and demonstrate the knowledge of various queuing models.

Cost Accounting

CO1: Understand importance of cost accounting in organization.
CO2: Apply the principles of managing inventories of materials and the procedures for accounting inventory.
CO3: Apply the principles and practice of costing labour to a business.
CO4: Apply the principles and process of overhead cost analysis.
CO5: Apply the operation of unit or output costing and process costing methods.

Business Laws

CO1: Demonstrate an understanding of the legal environment of the business.
CO2: Explain legality of object and consideration, discharge of a contract and remedies available.
CO3: Identify the recognition of transactions involving the sales of goods act.
CO4: Dramatize the application of consumer protection act.

CO5: Recognize intellectual property rights and introduction to it act 2000 and right to information act.

Strategic Management

CO1: Explain the strategic management process and craft strategies.
Co2. Analyse the components of environment analysis in depth.
Co3. Formulate the various corporate strategies.
Co4. Plan and produce strategies tailoring to fit specific industry.
Co5. Explain the various issues and importance of strategic leadership.

Financial Markets & Institutions

CO1: Explain and analyze the various functions and importance of indian financial system
CO2: Classify capital markets and assess the rational content and current reforms to capital market regulations
CO3: Analyze the features of money market and list out the various money market instruments
CO4: Identify and interpret the various services provided by a merchant banker
CO5: Explain the meaning, origin, and types of funds

Retail Marketing & Customer Relationship Management **CO1:**
Understand the important concepts of retailing.
CO2: Sketch the importance of merchandise management and phases in merchandise planning.
CO3: Explain the concept of human resource management in retailing
CO4: Explain and understand the approaches to develop customer service. **CO5:**
Analyse the various steps involved in crm process.

Entrepreneurship Development

CO1: Understand the nature and basic concepts of entrepreneur and entrepreneurship
CO2: Demonstrate the knowledge of entrepreneurship development programmes
CO3: Recognize the need for project report and analyze the concepts of project formulation
CO4: Interpret factory design and factory layout and identify the importance of standardization and quality control.
CO5: Differentiate small and large scale industries and identify the reasons for sickness of small scale industries.

Management Accounting

CO1: Explain an overview of management accounting, its need, scope and functions.
CO2: Prepare the financial statements and show its analysis and interpretation and apply different formula in ratio analysis.
CO3: Illustrate the preparation of funds flow statement and cash flow statement.
CO4: Explain marginal costing and budgetary techniques

CO5: Understand importanceofstandard costingandanalyzevarianceanalysis

CompanyLaw

CO1: Developbasicknowledge ofprovisionsofcompanies'act2013.
CO2: Describethecapitalstructureofcompanythroughissuesofsharesandalterationof share capital.
CO3: Explaintheborrowingpowersofacompanyandconsequencesofultravires borrowing.
CO4: Statevariousprovisionsofthecompaniesactrelatingtocompanymanagementand meetings.
CO5: Identifyvariousmodesofwindingupandlegalprovisionsapplicable.

B.B.AEntrepreneurshipDevelopment

ProgrammeSpecificOutcomes:

PSO1:Understand the importance of teamwork and group dynamics in achieving organizational goals and demonstrate ability to work effectively as a team.

PSO2:Analyzethedynamicsoftheorganizationalconflict,variousleadershipstylesandtheir execution.

PSO3: Think**critically**ofdiverseglobalperspectivesand challengesofglobalbusiness.

PSO4: Applytheknowledgeofentrepreneurship,finance,marketing,HR,andcomputer-based information systems to business operations

CourseOutcomes

BUSINESSENGLISH–I

CO1: Studentswillbeabletoidentifyelements,formsandstyleoflettersandwillbeabletocreate quotations related to inviting, sending and placing orders.
CO2: StudentswillbeabletoidentifyqualitiesandfunctionsofaSalesLetterinordertoenablethem use the format of a Sales Letter.
CO3: Tounderstandandwritethefunctions,structureandtypesofMemorandumanddesignanotice, agenda and minutes.
CO4: Todemonstratetheguidelinesforansweringandmakingeffectivetelephonecallsinorderto enable understand and implement Note making.

CO5: Tohave abetter understanding ofscanningandproofreadingincomprehension.

INDIANHERITAGE&CULTURE

CO1: Thestudentcanunderstandbetteraboutheoriginofancient Indianculture andthecontributions of great rulers from both north and south India for Indian culture in ancient days
CO2: StudentswillanalysehowPersianculture enteredintoIndiaandhowitinfluencedtheFine Arts of Indian society like Classical Music, Dance and Architecture
CO3: Studentcanabletoassesshowthe Indianorthodoxsocietyturnintomodernandwesternsociety in the 19th century .It also edifies the students with spiritual doctrines of various Religions.
CO4: Studentswillevaluatevariouschallengesfacebytheyouthandtheevilaffectsofterrorismon society
CO5: Thetopicsintheunitcreatebelongingnessamongthestudentsbybringingawarenessoftherights and duties to make the world a better place and it throw light on gender sensitization issues of women, Children and LGBT.

COMPUTERSINMANAGEMENTANDFUNDAMENTALSOF IT

CO1: Tounderstand basiccomputerterminology andnumber systems.
CO2: Toidentifydifferent operatingsystems, anditstypes
CO3: ClassifydifferentapplicationsofInformation technology
CO4: Analysetheimportanceofsystem developmentand thephasesof SDLC
CO5: Categorizemodernmeansofcommunications,typesof networksandtopologies

MANAGEMENTFOUNDATIONS

CO1: Identifyandinterpretthevariousprinciplesandimportanceofmanagement
CO2: Explain and demonstrate the uses of planning and organizing**CO3:**Classify and combine the various techniques of control and coordination.
CO4: Identifytheessenceofmotivationand direction
CO5: Interrelateandunderstand theessenceofleadershipandtheimportanceof communication

INTRODUCTIONTOENTREPRENEURSHIP

CO1:Describetheneedandimportanceofaccounting
CO2: Explain about subdivisionof journal
CO3: Compare thecashbookandpassbookbalancestoreconcile the difference
CO4: Analyze thefinancialpositionof an organization
CO5:Identifythemistakesinbooksofaccountsandhelpsincorrectingthem

FINANCIALACCOUNTING

CO1:Describetheneedandimportanceofaccounting

CO2: Explainabout subdivisionofjournal
CO3: Compare thecashbookandpassbookbalancestoreconcile the difference
CO4: Analyze thefinancialpositionof an organization
CO5:Identifythemistakesinbooksofaccountsandhelpsincorrectingthem

BUSINESSENGLISH–II

CO1: Studentswillbeabletoidentifyelements,formsandstyleoflettersandwillbeabletocreate quotations related to inviting, sending and placing orders
CO2: StudentswillbeabletoidentifyqualitiesandfunctionsofaSalesLetterinordertoenablethem use the format of a Sales Letter
CO3: Tounderstandandwritethefunctions,structureandtypesofMemorandumanddesignanotice, agenda and minutes
CO4: Todemonstratetheguidelinesforansweringandmakingeffectivetelephonecallsinorderto enable understand and implement Note making
CO5: Tohave abetter understanding ofscanningandproofreadingincomprehension

VALUEEDUCATIONANDPERSONALITYDEVELOPMENT

CO1: StudentswillbeabletoidentifyAcceptednormsandCountervalues.Theywillbeableto differentiate the various Dimensions of Human Development
CO2: StudentswillbeabletodemonstrateLoveandExperienceofGod.Theywillbeabletoidentify the Basic Issues of Life and Happiness as a life goal
CO3: TheywillabletounderstandtheimportanceofConcernforothers.Theywillabletocritiquethe various problems that deter the growth of the society
CO4: Thestudentswillbeabletorecognizethetraitsofagoodpersonality.Theywillbeableidentify their personality by Self-Exploration
CO5: StudentswillbeabletointerpretthePurposeofLifeandGoalSetting.Theywillbeabletolearn Self-Management.

FUNDAMENTALSOFBUSINESSSTATISTICS
CO1: Organize,manageandpresentdata.Canrepresentthestatisticaldataindiagrammaticandgraphical form
CO2: Calculatemeasuresofcentral tendency
CO3: Analyze thedata usingmeasuresof dispersion
CO4: Evaluatethenaturefor thestatisticaldatausingskewnessandmoments.
CO5: Determinetherelationbetweenanytwofactorsusingtheconceptsofcorrelationandregression analysis

ORGANIZATIONBEHAVIOUR

CO1: Torecognizetheimportanceofplanningandorganizingandapplyitispracticein organizations.

CO2: Toapplytheprinciplesofstaffing,directingandcontrolandmotivationaland leadership theories in the effective running of the organisation.

CO3: TorecognizetheimportanceofconceptofOrganisationBehaviourinorganizations **CO4:**To solve the problems of group behaviour, apply the principles of effective communication.

CO5: AnalyseandsustainOrganizationcultureandmanagechangeforthesuccessofthe organization**.**

INTRODUCTIONTOENTREPRENEURSHIPII

CO1: Toprepareabusinessproposal plan.

CO2: To recognize the distinct entrepreneurial traits and establishing an enterprise

CO3: Toidentifythetraininganddevelopmentrequiredtobecomeanentrepreneur **CO4:**To classify and analyse the resource mobilization and funding organizations andalsoidentifyvariousschemesprovidedbygovernment

CO5: Torecognizetheregistrationprocessofabusiness enterprise.

MANAGERIALECONOMICS

CO1: Understandthebasictermsandconceptsusedinthemanagerialeconomics

CO2: Appraisethebehaviourof consumersthroughthedemandandindifference analysis

CO3: Interpretthebehaviourofproducer throughsupply,productionandotherrelatedconcepts

CO4: Differentiatethemarket formsandthepriceand outputdetermination undereachtypeof market

CO5: Infer theimpactofthemacroeconomicfactorsonthebusinessconcerns.

BBARetailOperationsManagement(ROM)

ProgrammeSpecificOutcomes:

Studentswillbeableto:

PSO1: Develop&evaluateManagerialDecisionstoidentifyoptimalsolutioninRetailIndustry.

PSO2: Demonstrateeffectiveapplicationcapabilitiesoftheirconceptualunderstandingoftherealretail business world.
PSO3: Exhibiteffectivedecisionmakingskills,,employinganalytical&criticalthinkingability.
PSO4: Effectiveoral&writtencommunicationskillsinprofessionalcontext.
PSO5: Leadership&networkingskillwhilehandlingretailbusinesssituations.

CourseOutcomes:

FA

CO1: Describetheneedandimportanceofaccounting
CO2: Explainaboutsubdivisionofjournal
CO3: Comparethecashbookandpassbookbalancestoreconcilethedifferenc
CO4: Analyzethefinancialpositionofanorganization
CO5: Identifythemistakesinbooksofaccountsandhelpsincorrectingthem

BUSINESSENGLISH-I

CO1: Studentswillbeabletoidentifyelements,formsandstyleoflettersandwillbeabletocreate quotations related to inviting, sending and placing orders
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INDIANHERITAGE&CULTURE

CO1: Thestudentcanunderstandbetteraboutheoriginofancient Indianculture and the contributions of great rulers from both north and south India for Indian culture in ancient days
CO2: StudentswillanalysehowPersianculture entered into India and how it influenced the Fine Arts of Indian society like Classical Music, Dance and Architecture
CO3: Studentcanabletoassesshowthe Indianorthodoxsocietyturnintomodernandwesternsociety in the 19th century .It also edifies the students with spiritual doctrines of various Religions.
CO4: Studentswillevaluatevariouschallengesfacebytheyouthandtheevilaffectsofterrorismon society
CO5: Thetopicsintheunitcreatebelongingnessamongthestudentsbybringingawarenessoftherights and duties to make the world a better place and it throw light on gender sensitization issues of women, Children and LGBT.

IntroductiontoRetailOperationsandinStoreCashiering

CO1: Recognizethestructure&functioningofretail sector
CO2: SupplychainsystemofRetail stores
CO3: Evaluatetheprocessofretailstoresoperations
CO4:understandthebasicsof POS.
CO5: Distinguishthemechanismofdefiningproductsinaretailstores

Retailcashier

CO1: Studentswillbeabletoperformretailcashier&traineeassociaterolewithintheorganization.

RetailTraineeAssociate

CO1: Studentswillbeabletoperformretailcashier&traineeassociaterolewithintheorganization.

InternationalAccountingandFinance

ProgrammeSpecificOutcomes:

Studentswillbeableto:

PSO1: Understand thenatureandbasicconceptsofInternationalAccounting&Financeand express them effectively in the provisions according to the International Financial Reporting Standards.

PSO2: Abilitytoapplyandanalyzetheprovisionsinapplicationofthroughandfare views of auditing and accounting to check the true and fair accounting to be maintained

PSO3: Thinkcriticallytointegrateknowledge,skillandattitudethatwillsustainan environment of learning and creativity among the students.

PSO4: Applyandappreciatethebenefitsofexperientiallearningbydisplayinggoodwork habits, time management and self-discipline.

PSO5: Interpretanddevelopthestudentsabilitytoclearalltheand professional level papers of ACCA.

AccountantinBusiness

CO1: Tomake thestudentsunderstandthestructure ofbusinessorganizations.

CO2: Toexplaintheaccountingandreportingsystemsandtheirrelationshipwithother business functions.

CO3: Topointoutthe importance ofleadership&motivationtheories.

CO4: Toexplainthe importanceof communicationinbusiness.

CO5: Toanalyzetheprofessionalethics inaccounting&business.

FinancialAccounting

CO1:Describetheregulatory framework ofifrs.

CO2:Understandthevariousaccountingstandardsandtheirapplications. **CO3**:

Apply the provisions of accounting standards to various concepts. **CO4**:

Analyze the financial position of an organization

CO5:Evaluate theprofitabilitypositionofacompanyintermsofratios

CostAccounting–I

CO1:Tounderstandtheroleofmanagementinformationinplanning,controllingand decision making

CO2:Todescribetheprinciplesofmanaginginventoriesofmaterialsandtheproceduresfor accounting for inventory

CO3:Todescribe theprinciplesandpractice ofcostinglabour toa business

CO4:To describe principlesandprocesses ofoverheadcostanalysis

CO5:Tounderstandtheimplicationsofmarginalcostingincontrasttoabsorptioncostingfor management information

Taxation-I

CO1: Todescribe thebasicterminology ofIndiantaxationsystem.

CO2: Todifferentiatetheallowancesasfullytaxable,partlytaxable,nottaxable,and

computationofincomefromsalary

CO3: Toexplainthe valuationofincomefromhouse property.
CO4: Toapplytheprovisionsrelatingtoincome frombusinessandprofession
CO5: Toevaluatethe computationofcapitalgainLTCGandSTCG

BusinessLaws

CO1:Demonstrate an understandingofthelegalenvironment ofthe business.
CO2: Explainslegalityofobjectandconsideration,dischargeofacontractandremedies available.
CO3:Identifytherecognitionoftransactionsinvolvingthesalesof goodsact.
CO4:Dramatizetheapplicationofconsumerprotectionact.
CO5:Torecognizeintellectual propertyrightsandintroductiontoitact2000andrightto information act.

CostAccounting–II

CO1:Toapplytheoperation ofprocesscostingmethods
CO2:Topreparebudgetsforanorganizationandapplythestatisticaltechniquesincostand management accounting
CO3:Toidentifythemethodsforassessingtheviabilityofcapitalinvestments
CO4:To produce operatingstatementsusingbasicstandards andvariances
CO5:To understandthescopeofperformancemeasurementandperformance indicators

Taxation-II

CO1: Todescribethe basicconceptofincome fromsecuritiesandincomefromother sources
CO2: Todifferentiatetheprovisionsrelatingtosetoffandcarryforwardof losses
CO3: Toexplaintheproceduresofdeductionsandgrosstotalincomeandtaxliability
CO4: Toapplyoperationsofassessingofficer,assessmentandtypesofassessmentsandfiling of returns
CO5: Toevaluate the computationofGSTongoodsandservices

FinancialReporting

CO1: Toorganizetheinternationalfinancial reporting standards
CO2: Toclassify accountingfor transactions
CO3: Toanalyzetheinterpretationoffinancial statements
CO4: Topreparefinancial statements
CO5: Toprepare consolidatedfinancialstatements

ManagementAccountingTechniques–I

CO1:Understandthemodernmanagementaccountingtechniques.
CO2:Application ofspecialistcosttechniques inmanagementaccounting.
CO3:Understandingemergingdecisionmakingtechniquesofmanagementaccounting.
CO4:Application ofemerging decisionmakingtechniques inmanagementaccounting.
CO5: To implement the budgetary control strategies in management accounting

AdvancedAccounting

CO1: Statesvariousmethodsforpreparingbranchaccounts.
CO2: Describestheallocationandinterdepartmentaltransferof expenses.
CO3:Analysesthefinancialpositionof non-tradingconcerns.
CO4:Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar,premium and forfeiture.
CO5: Explainsaboutsourcesoffundsthroughissueofdebenturesandvariousmethodsof redemption.

FundamentalsofInformation Technology
CO1:Studentswillbe able toexplainabout computer.
CO2:They willgetidentifydifferenttypesofoperatingsystems
CO3:Studentswillbeabletoanalyzeusageofcomputersincommercial,scientificand entertainment
CO4:Studentswillbe abletoclassifytypesof software's
CO5:Studentswillbe able tochoose networkservice andusage

FinancialManagement
CO1:Toexplainthenatureandpurposeoffinancialmanagementanddiscusstheimpactof macroeconomic policy
CO2:Toidentifythenatureandroleofcapitalmarketsbothnationallyandinternationally **CO3**:
To analyze basic investment appraisal techniques and working capital management **CO4**:
To suggest appropriate sources of finance for a business and valuing the businesses andfinancialassets
CO5:To compare andevaluate themethodsofforeigncurrency riskmanagement

CorporateAccounting
CO1: To understand the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofits before incorporation.
CO2: Explainsthevaluationof sharesandgoodwill.
CO3: Analysesamalgamationinthenatureofmergerandpurchaseandaccountingtreatment for internal reconstruction.
CO4: Demonstratestheaccountingsystemsofabankingcompanyunder theguidance ofrbi.
CO5: HelpstoprepareinsuranceaccountsasperIRDAI guidelines.

ManagementAccountingTechniques–II
CO1: Toillustratequantitativeanalysisinbudgeting&learning curve effect.
CO2: Toapplytheformulaeofadvancedvariances instandardcosting.
CO3: Toexplainperformanceanalysis&behavioural aspects inmanagement.
CO4: Topointouttheperformancemanagementinformationsystems&importanceof management reports.
CO5: Toevaluatetransferpricing&performanceanalysisinprivatesector&innotfor profit organizations.

BusinessStatistics
CO1:Studentswillbeable toknowbasicstatisticalconcepts forcollection,organizationand

itslimitations.Theywillalsobeabletodeterminetheconsiderationsandoptionsfor designing a sample.

CO2:Studentswillbeabletorepresentthestatisticaldataindiagrammaticandgraphical form.

CO3:Studentswillbeabletomeasuresofcentraltendency, dispersionandsymmetrical nature for the given data.

CO4:Studentswillbeabletoanalyze therelationbetweenanytwofactorsusingthe concepts of moments, skewness, and correlation and regression analysis.

CO5: Students will be able to predict the future events and/orestimatingunobservable componentsliketrendandseasonaleffectsbyusingtheconceptsoftimeseriesanalysis. Theywillalsobeabletodeterminationofthevalueofmoneyusingpriceindexnumbers anddisplaysthechangeinpricelevelsanddepictsinflationordeflation.

EntrepreneurialDevelopment

CO1:Understandthenatureand basicconceptof entrepreneurandentrepreneurship.

CO2:To analyzetheideageneration andassessmentprocess.

CO3:Recognisetheneedforprojectreportandanalyzetheconceptsofprojectformulation anddifferentiatesmallandlargescaleindustriesand identifythereasonsforsickness of small scale industries

CO4:Demonstratetheknowledgeofentrepreneurshipdevelopmentprogrammes

CO5:Toidentifyandexplaintheimportance of valuesandethics

AuditingandAssurance

CO1: Toexplaintheauditand assurance

CO2: Toorganizetheauditplanningandcontrol

CO3: To interpretthe performance analysis

CO4: To identify the evidence

CO5: Todescribe reviewandreporting

MarketingManagement

CO1: Explainstheconceptof marketingandsketches themarketingenvironment.

CO2: Classifiesthemarket andidentifiesthevarious marketsegments

CO3: Pointoutsthemarketingmixwithreferencetoproductandprice **CO4:**
Analyzes the promotion mix and the channels of distribution.

CO5: Explainsservicemarketingmixandpointsouttheimportanceofdirectandonline marketing.

ResearchMethodology

CO1: Tounderstandandinterpretthebasicmeaningofresearch,todefinetheresearch problem at hand and construct the procedure for undertaking research.

CO2: Toformulatehypothesisanddevelop anappropriateresearchdesign.

CO3: Toclassifythedifferentsourcesofdataandanalyzethevariousmethodsofdata collection.

CO4: Todevelop themostappropriatesamplesizeand designaswellas determinationof

samplingandnon-samplingerrors.

CO5: Toclassifythevarioustypesofattitudemeasurementscalesandappliestheprinciples and format of report writing and presentation.

PerformanceManagement-I

CO1: Todescribethestrategicplanningandcontrol

CO2: Toanalyzetheexternal influencesonperformance

CO3: Toorganizetheperformance measurementsystemsand design

CO4: Todescribestrategicperformancemeasurement-I

CO5: Toclassifystrategicperformance measurement-II

HumanResourceManagement

CO1: Tounderstand theconceptofHRM,functionsand changingrole ofaHRmanager

CO2: Todistinguishbetweenthevariousmethodsofjobdesignandinterpretthetechniques of acquisition of human resource.

CO3:ToexplaintheimportanceofHRPandpointoutthevarioushrdapproachesforworklife balance and describe the concept of job evaluation.

CO4: ToanalyzethecoreconceptsofHRD,TQMandunderstandtheconceptofcareer development.

CO5: Toexplainthe variousconceptsofworker'sparticipationandqualityof worklife.

Advanced Auditing and Assurance

CO1: Toexplaintheauditandassurance

CO2: Toorganizetheauditplanningandcontrol

CO3: To interpretthe performance analysis

CO4: To identifythe evidence

CO5: Todescribe reviewandreporting

PerformanceManagement-II

CO1: Toexplaintheperformance evaluation

CO2: Toorganizetheperformance measurementand control.

CO3: Tointerprettheperformanceanalysis

CO4: Toidentifythecurrent developments

CO5: Todefendrecenttrendsinperformancemanagement

InternationalBusiness

CO1:Explainstheoverviewofinternationalbusinessanddemonstratestheenvironmentof international business.

CO2:Explainsabout thevariousforms oftraderegulationandintegration.

CO3:Sketches thevarious modesofenteringtheinternationalmarket.

CO4:Itpointouttheconceptualframework ofe-businessandpolicyframeworkforglobale-

business.

CO5:Itanalyzestheintercultural communicationontheglobalperspective.

CorporateGovernanceandEthics

CO1:Toanalyzeandinterpretthevarious moralstances required forcorporategovernance.
CO2:Toidentifyandexplaintherolesandresponsibilitiesofdirectorsandboard committees.
CO3:Todemonstratehowriskisidentifiedandassessed.
CO4:To explainthevariousriskmanagementstrategies.
CO5:Torecognizetheneedandimportance ofbusinessethicsandvalues

E-Commerce

CO1:Explainelectroniccommerceframework andwwwarchitecture

CO2:Select mercantileprocess modelsand typesofelectronicpaymentsystems.

CO3:ApplyEDIimplementationsandanalyzeintraorganizationalelectroniccommerce

CO4:Chooseadvertisingandmarketingontheinternet.

CO5: Identifyconsumersearchandresourcediscovery,ondemandeducationanddigitalcopy rights

CorporateReporting

CO1: Toorganizetheinternationalfinancial reporting standards

CO2: Toclassify accountingfor transactions

CO3: Topreparefinancialstatements

CO4: Topreparefinancialstatements

CO5: To analyze current issues

B.A.MassCommunication

Programme Outcomes

PO1:CriticalThinking: Takeinformedactionsafteridentifyingtheassumptionsthatframeour thinking and actions, critically evaluate. The validity of arguments and conclusion, and looking at our ideas and decisions (intellectual, organizational, andpersonal)From Different perspectives.

PO2: **Effective Communication**: Speak, read, write and listen clearly in person andthrough electronicmediainEnglishandinoneIndianLanguage,andmakemeaningoftheword by connecting people, ideas, books, media, and technology.

PO3:**SocialInteraction**:Elicitviewsofothers,mediatedisagreementsandhelpreach conclusions in group settings.

PO4: **Conduct Investigation of Complex Problems**: Use research based knowledgeand research methods including design of experiments, Analysis and interpretationofdata, and synthesis of information to provide valid conclusion

PO5: Effective Citizenship: Demonstrate empathetic social concern and equity centered nationaldevelopment,andtheabilitytoactwithaninformedawarenessofissuesand participate in civil life through a volunteering.

PO6:Ethics: Recognizedifferentvaluesystemsincludingyourown,understandthemoral dimensions of your decisions, and accept responsibility for them.

PO7:EnvironmentandSustainability:Understandtheissuesofenvironmentalcontextsand sustainable development.

PO8:Self-DirectedandLifelongLearning:Acquiretheabilitytoengageinindependentand lifelong learning in the broadest manual**.**

ProgrammeSpecificOutcomes:

PSO1: Understand thenatureandbasicconceptsofMassCommunicationandexpressthem effectively in writing, speaking and audio-visual medium.

PSO2: Analyzetherelationshipbetweenmediaandsociety,andthevariousways individuals respond to socio-political-religious-cultural-ethical -economicandsustainable goals.

PSO3: Think critically about debut, films, documentaries, articles, editorials and music while takingintoaccountdiverseinterpretationsfromdifferentviewpoints.Beingexposedto wide range of perspective the students gain the ability to construct a public opinion which is socially responsible, ethical and humane leading to effective citizenship.

PSO4: ApplythetheoriesofMassCommunicationtounderstandcomplexproblemsofsociety and create a content, catering to the needs of pluralistic society.

PSO5: Designingcreativecontent thatsuitsforvariousmedia platform.

IntroductiontoMass Communication

CO1: Studentsunderstandwhat'shumancommunication,it'stypesandhowcommunication differs in various levels

CO2: Studentsunderstandthecharacteristics,natureandscopeofjournalismandmass communication

CO3: Studentsapplydifferentcommunicationmodelstohelpcommunicatemessagesand understand the audience.

CO4: Studentsanalyzebyapplyingvarioustheoriesusedinmasscommunicationand understand audience behavior and reactions, hence, giving an insightinIndian Media.

CO5: Studentsunderstandhowtraditionalmediaandvariousfolkformshelppeople communicate to the audience.

IntroductiontoSocio-Political India:

CO1: Studentsunderstandthecurrentsocial,economicandculturalconditionsandproblemsof India

CO2: StudentsunderstandtheIndianpoliticalsystem,PanchayatRajandtheunderstandingof the Indian Constitution.

CO3: Studentsunderstandthevariousstatusesofdifferentsectorsof Indiansocietiesandthe schemes involved to alleviate them.

CO4: Studentsapplytheconceptsofhumanrights inIndiaandhowitisimplementedby various

organizations.

CO5: StudentsunderstandGlobalization,itsimpactandthecrisisagriculturesocietywhichalso includes the civil movements involved.

DigitalAudio Production

CO1: Studentsdesignsoundbyusing these componentsofsound.
CO2: Studentsunderstandthehistoryofrecordingandformat.TheylearntheuseofRTA software.
CO3: Studentsunderstandtheimportance of thesoundequipmentinsounddesigning.
CO4: Studentsapplytheconceptsofsoundproductionwhile designingthesound.
CO5: Studentslearnthe processofsoundmixing.

IndianPrintJournalism:

CO1: StudentsanalyzetheworkingofthepressinIndiaandit'schanginglandscape globally.
CO2: Studentsunderstandtheworkingofpressfromthepastandvariouspioneersinvolvedin the evolution of Press in India.
CO3: Studentsevaluatetheworkingofregionalpressfromthepastandvariouspioneers involved in the evolution of Regional Press in India.
CO4: StudentsunderstandthecoverageofPeople'smovementbyIndianPressandtheir representation.
CO5: StudentsremembertheimpactofglobalizationonthepressandEmergenceofsocial media as the 5th estate in democracy.

IntroductiontoElectronic Media

CO1: Studentsunderstandtheoriginand growthofIndian radioandAllIndia Radio.
CO2: Studentsunderstandthestatusof radiointheera ofTV andNew mediaanditsnewtrends.
CO3: StudentsunderstandtheoriginandgrowthofTVinIndiaandvariousprojectsrelatedto its' growth.
CO4: StudentsunderstandthegrowthandnewtrendsofTVaftertheseparationofDDfrom AIR and the Prasar Bharathi Act.
CO5: StudentsremembertheintroductionofcableTV,STARandZEEnetworkandthenew trends in TV.

Digital Photography

CO1: StudentsunderstandtheoriginandhistoryofPhotographyandthevariousCamera components.
CO2: StudentsapplytheTypesof cameras,lensesandtherulesof Photography
CO3: Studentscreate photographswiththeusageof lightsand flash.
CO4: StudentsunderstandthevarioustypesofPhotographyinMedia.
CO5: Studentsanalyzethepost-productionprocessofPhotographyusingsoftware'sandit's digital storage formats

Photography

CO1: Studentsunderstandtheevolutionofphotographyandthebasictermsinvolvedin photography.

CO2: Studentsanalyze thefunctionsofthepartsofacameraandusageofdifferenttypesof cameras.
CO3: Studentslearnandapplythecompositionofshotsandimportanceoflightingandit's techniques in photography.
CO4: Studentsevaluatetheeditingsoftwaretechniquesandusageofaptstorage devices.
CO5: Studentsapplytechniquesinvolvedinvariousformsofphotographyinthecurrent market.

Film Appreciation
CO1: Studentsunderstandanddescribetheimportanceoffilmsinthesocietyandtheevolution of cinema from the past.
CO2: Studentsunderstandtherulesoffilmandthe artofmakingaesthetic cinema.
CO3: Studentsanalyzethetechniquesinvolvedinmakingeffective films.
CO4: Studentscreate filmsthroughtheseelementsof film.
CO5: Studentsunderstand aboutworld-widecinemaanddifferent genres of films.

Media.CultureAnd Society
CO1: Studentsunderstandthenatureandscopeofmediaandlearnaboutdifferenttheories involved in consuming media messages.
CO2: Studentsunderstandthemediaandthepsychologicaleffectsofmediacontentonthe society.
CO3: Studentsevaluate theimpactofmediaonanindividualandsocietyandwhypeopleuse media.
CO4: Studentsanalyzeculture,itsideology andpop-culture.
CO5: Studentsunderstandtheunconventional formsof mediainmodernsociety.

HistoryOfIndianJournalism
CO1:Studentsunderstandthepressanditsrole anditsevolutionthroughthe years.
CO2:Studentsrememberindetailaboutthehistoryofpressanditscontributioninthe nationalist movement.
CO3:Studentsunderstandtheintroductionoflocalpressandnewspapersindifferentregional languages.
CO4:Studentsunderstandtheroleofpressinsocietythroughvariousmovements.
CO5:Studentsunderstandthetrendsthatevolvedinpress.

ElementsOfFilm
CO1:StudentsunderstandtheconceptoffilmandIndianCinema
CO2:Studentsanalyze the processoffilmproductionandthestagesinvolvedinit.
CO3:Studentsanalyze thetechnicaland visualaspectsoffilmmaking.
CO4:Studentsunderstand theevolutionoffilmsthroughhistoricmovementsand films.
CO5:Studentsunderstandtheconceptsandtypesof documentary.

TelevisionProduction
CO1:Studentsunderstandthetypesoftelevisionandstructure of atelevisionstudio.
CO2:Studentsapplythescriptingtechniques fortelevisionproduction.

CO3:Studentsanalyzethe technicalfunctioning ofcameraand itsparts.
CO4:Studentsanalyzethebasiceditingandlightingtechniques.
CO5:Studentsunderstand theroleofDirector andProducer

ReportingAnd Editing

CO1:Studentsapplythebasicsofreportingandthequalitiesofareporterandtheprivileges given to reporters.
CO2:Studentsapplythenewselementsandsources,differentformatsofnewswritingand types of lead.
CO3:Studentsunderstandthedifferenttoolsofnewsgathering,interviews,principlesofediting and style sheet.
CO4:Studentsapplytheprinciplesandtechniquesofwritingheadlinesandeditorialsandtheir types.
CO5:Studentsanalyzetheimportanceofnewspaperdesignandlayout,pagemakeup,caption and cutline.

FilmStudies

CO1:Studentsunderstandthehistoryofcinema,evolutionofnarratives,filmlanguageand classic Hollywood narratives, and the discovery of shot.
CO2:StudentsunderstandaboutclassicandmodernHollywoodcinemaandJapanesecinema.
CO3:Studentsunderstand aboutFrench newwave, Italian neo-realismandIndianart cinema.
CO4:Students apply the film theory and criticism, cinema and storytelling, cinematic codes, cinematographyand editing.
CO5:StudentsunderstandthegenreandformofIndiancinema,songanddancesequences, films on social issues and censorship.

DigitalFilmMaking

CO1:Studentsunderstanddifferentfilmmovements,developmentofclassicalIndianand Hollywood cinema and Origin of classical narrative.
CO2:Studentsanalyze theaspectsandprocessofpre-productioninfilmmaking
CO3:Studentsanalyzetheproductionprocess,roleofdirector,understandcinematographyand work with sound.
CO4:Studentsapplybasic methodologyand grammar ofeditinganduse ofvisualeffects
CO5:Studentsunderstand Filmdistribution,marketingandthefilmmarket

Advertising

CO1:Studentsunderstandthenature andscope ofadvertisinganditsrole in society
CO2:Studentsunderstandtheevolutionandroleof advertisinginPR.
CO3:Studentsanalyzethe advertisinginvariousformsof media
CO4:Studentsapplyadvertisingintheconceptofmarketingandmediaplanning
CO5:Studentsanalyze thevariousaspectsandstages of advertising

MediaLawsAndEthics

CO1: StudentsunderstandthevariouslawsandfeaturesofIndianConstitutionandits implications in the societal norms.

CO2: StudentsunderstandthelawsrelatedtothePress;rights,liabilitiesandlimitationsin Indian context

CO3: StudentsapplythespecialprivilegesofIndianParliament; therightsandlegalitiesin Indian context with regard to the Press.

CO4: Studentsunderstandthesignificance ofvariousmassmediaActs;itsimplicationstothe Press freedom and the legalities associated with it with a Journalistic approach.

CO5:StudentsanalyzethelegalitieswithrespecttothetwoPressCommissionsinIndiaandits implications on Print and Electronic Media.

DevelopmentCommunication

CO1: StudentsunderstandthebasisofDevelopmentCommunicationanditsimportanceforthe development of the backward societies.

CO2: Studentsunderstandthesocio-economicprospectsanddecentralizationpatternsforthe betterment of underdeveloped nations through mass Media.

CO3: Studentsanalyzetheimportanceofimplementingruraldevelopmentstrategiesforthe community development in Rural India.

CO4: StudentsevaluatetheconceptualpatternsofDevelopmentSupportCommunicationand also to inculcate the Participatory communication process.

CO5: Students analyze the ongoing issues of rural origins and it allows implementing the awarenessstrategiesandproblemorientedapproachesthroughtheusageofMassmedia.

MassMediaResearch

CO1:StudentsunderstandthegenesisofconductingaScientificResearchinthefieldofMass Media.

CO2:StudentsapplytheMethodologiesoftheScientificResearchtoconducttheirresearch intending on the specified subject matter.

CO3:StudentsanalyzevariousmethodsofQualitativeResearchinordertofindouttheresearch findings of the specific subject matter.

CO4:StudentsanalyzevariousmethodsofQuantitativeResearchinordertofindoutthe research findings of the specific subject matter.

CO5:StudentsevaluatevariousunderlyingtheoriesofMassmediainordertounderstandthe effects of the desired outcomes of the subjective research outcomes.

Media Management

CO1:Studentsunderstandtheconceptualpatternsofmassmediaorganizationsandits underlying trends of media management and ownership prospects.

CO2:Studentsapplythemtostrategicallyapproachinthe Print media.

CO3:StudentsanalyzeabroaderpictureofthemanagementprocessofFilmIndustryandalso to understand the transitional shifts in the field ofCinema.

CO4:Studentsevaluate bydecodingthechangingtrends inthe Broadcastmedia.

CO5:StudentsunderstandthebroaderperspectiveonvariousGovernmentregulatory mechanisms and policies.

NewMediaStudies

CO1:Studentsunderstandtheconcedingfactors ofDigitalizationand itsimplications.

CO2:StudentsapplytheDigitalMediaTrendsasamediumofmassmediaandalsomakethem understand the utilization of CMC in the various new Media entities.
CO3:Studentsanalyzetheconceptualizedpatternsofnewmediaentitiesanditsconnectionto the real life events.
CO4:StudentsunderstandthecomplexitiesofaspectssuchasOnlineRelationships,Virtualand Impersonal complexities of the Digital communication trends.
CO5:StudentsunderstandthetheoreticalframeworksandconceptualizedpatternsofNew Media Effects and legalities

OnlineJournalism
CO1:Studentsunderstand theJournalisticapproaches throughnewmedia entities
CO2:Students apply the salient features of Online Journalism which helps them to communicatetheintendedinformationthroughtheresourcesavailableinthisfield.
CO3:StudentscreatetheunderlyingconceptsofParticipatorycommunicationviamultimedia approaches of Online Journalism
CO4:StudentscreateandutilizethesourcesofOnlineJournalisticapproachesthroughthe means of Social Networking platforms.
CO5:Studentsanalyzethe lawsandethicsof Digital Media Trends.

RadioProduction
CO1:Studentsunderstand theconceptualprocessofRadioProduction.
CO2:StudentsevaluatethecomplexitiesofRadioProductionasameansofmass communication.
CO3:StudentscreatetheRadioscriptsandotherpracticalimplicationsof theradioproduction.
CO4:Studentsevaluatethecomplexitiesof theRadioBroadcastingindetail.
CO5: Studentscreate RadioNews ReportandalsotheRadiofeature reporting.

PublicRelations
CO1: StudentsunderstandthetheoreticalknowledgeoftheconceptualpatternsofPRasatool of mass communication and also apply PR as a Management function.
CO2: StudentsapplytheprinciplesofPRasaprocessofmasscommunicationandalsohelps them to achieve the interrelationships with the clients.
CO3: StudentsapplytheOrganizationalstructureofPublicRelationsandalsotolearnaboutthe process of Public Relations under different occasions of marketing.
CO4: Studentsanalyze thecomplexitiesofPublicRelationsand its3tiersystems. Theyalso createthepracticalknowledge tobuildthepositiverelationshipswiththePRAgencies and clients.
CO5: StudentscreateanEventthroughPRasatoolofmanagementcommunicationandalsoto engage the intended target audience.

B.Sc.Multimedia&Animation

ProgrammeSpecificOutcomes:

PSO1: Identifyandmemorizetheconceptsof(2d/3d)pipelineforpreproduction,production& post production.
PSO2: Recognizetheprinciplesofvisualart&design,advertising,gaming,theatrearts&its elements with illustration, perspective & composition.
PSO3: IdentifyuserinterfaceofAutodeskMaya, adobecompositing, web designand ad word.
PSO4: Applytheelementsofvisuallanguageofdots,lines,shapes,forms,contour&texturefor preproduction of animation films & game designing concepts.
PSO5: Analyse,Distinguish&identifythefigurativereadingofpicturesquerelationshipamong elements like perception, verbalization & creativity.
PSO6: ApplythesoftwareskillsofMaya fortheproduction,compositingandeditingforpost production of demo reels.
PSO7: Developcreativethinkingwhileproducingdifferentanimationfilmsrequiredfor production houses.
PSO8: Developthebehaviour&consequencesinmedia&employeerelationships.

IndianHeritageandCulture

CO1: This unit makes the student to *understand* better about the origin of ancient Indian culture thecontributionsofgreatrulersfrombothnorthandsouthIndiaforIndianculture inancient days.
CO2: Studentswill*Analyse*howPersianculture enteredintoIndiaanditinfluencetheFine Arts of Indian society like Classical Music, Dance and Architecture.
CO3: Studentisableto*assess*howtheIndianorthodoxsocietyturnintomodernandwestern society in the 19th century .It also edifies the students with spiritual doctrines of various religions.
CO4: Studentswill*Evaluate*variouschallengesfacebytheyouthandtheevilseffectsofterrorism on society
CO5: ThetopicsintheunitCreatebelongingnessamongthestudentsbybringingawarenessof the rights and duties to make the world a better place and it throw light on gender sensitization issues of women, Children and LGBT.

PrinciplesofVisualDesign

CO1: Recognise theprinciplesof VisualDesign
CO2: Telltheimportance of visuallanguage indailylife
CO3: Apply, organize,sketch&paintusingtheelementsofvisuallanguageofDots,Lines,and Shapes, Forms, Contour& texture.
CO4: Analyse,distinguishidentifythefigurativereadingofpicturesquerelationshipamong elements like perception, verbalization& creativity.
CO5: Compare visualbuildingbyexaggeration,distortion,stylization&abstraction

GraphicDesigning

CO1:Memorize&recognizes,History,Generations,introductiontoHardwareand software.
CO2: Analyze&comparerastergraphic, vectorgraphic.
CO3: ApplythePhotoshopsoftwareforeditingimages,doing2Danimation.
CO4: Studentswillalso be ableto understand
CO5: ApplythesoftwareIllustratortoblendshapes,colors, text&transformingobjects.

BasicConceptsofArts
CO1: Describe,define &recognizetheVarietyofartmedia&Artcareers.
CO2: Explainandinterrelate thedifferentmodesof art.
CO3: Describe&memorizetheevolutionandhistoryofart.
CO4: Demonstrating ofartist'sknowledge, artstyleand movement.
CO5: Judge,criticizeVisual Artandcomparefineartsand commercialart.

ProgrammingThrough'C'
CO1: Memorize&recognizethebasic Cprogram,workflowandCompilingaCprogramme.
CO2: Explainthedifferenttypesofvariables,datatypes,outputformats.
CO3: Showhowconditionalstatementswork.
CO4: Analyse ArrayBasics&functionsinClanguage.
CO5: ComposeRandomnumbers,strandfractions,usingstringsinaprogramme.

Introductionto Animation
CO1: Identifythehistoryof Animation
CO2: Compare the Traditional and Computer generated Animation.
CO3: Compareinwhichwaythe2D,3DAnimationpipelineworks. **CO4:**
Describes the History of Disney &Pixar Animation studios.
CO5:Creates advance flipcardanimation,buildingmodels,andlighting.

Camera Techniques
CO1: Describeearlyexperimentsinphotography,historyof camera.
CO2: Categorizevarioustypes oflens&characteristicsoflens,focallengthetc.
CO3: Generalizetheimportanceoflight,properties oflight&basiclightingtechniques.
CO4: Explaincolourtheory, colourpsychology,cameraangles and movements.
CO5: Demonstratevideocameraoperation.

ConceptDevelopment
CO1: Identify,list&memorizebasicstoryofidea &organize ideasintoconcepts.
CO2: Explains,differentiates&distinguishaboutnarrativestructure&CasestudyofAnimation Films.
CO3: Define &explainthe Visualelements inconceptdevelopment.
CO4: Demonstrate,distinguish&explainaboutIllustration,Perspective& Composition.
CO5: Define, Classify&explains,theFraming, MovementandMeaning

WebDesign
CO1: Define &identifytheuser interfacefor webdesign.

CO2: Explainbasictags&advancedtags,elements,heading,lincforms, images,tables,formats,frame settings etc.
CO3: Designfront page, layoutdesign,backgroundetc.usingPhotoshop.
CO4: Designbanners,animation,twiningtypes,buttoncreation,linkingtexttype'setc.using flash.
CO5: Developthetechnicalskillstocreatethesitewithlinkpage,imageimportingHTML conversion.

CreativeArts

CO1: RecognizetheprinciplesofVisualDesign
CO2: Telltheimportance of visuallanguage indailylife.
CO3: Apply, organize,sketch&paintusingtheelementsofvisuallanguageofDots,Lines,and Shapes, Forms, Contour& texture.
CO4: Analyse,distinguishidentifythefigurativereadingofpicturesquerelationshipamong elements like perception, verbalization& creativity.
CO5: Comparevisualbuildingbyexaggeration,distortion,stylization&abstraction.

IntroductiontoMaya

CO1: Recognizenarrativeelements&elementsofscriptformat.
CO2: Explainthecontent,planeofdiscourse,pointofView etc.
CO3: Identify narrative functions & means of expression on plane of discourse &event.
CO4:Differentiatenarrativefictionanddocumentary,narrativeapproachimageandsound. **CO5**: Appraise the narrative efficiency & richness with the use of metonym & metaphor.

NarrativeTechniques

CO1: Recognizenarrativeelements&elementsofscriptformat.
CO2: Explainthecontent,planeofdiscourse,pointofView etc.
CO3: Identify narrative functions & means of expression on plane of discourse &event.
CO4:Differentiatenarrativefictionanddocumentary,narrativeapproachimageandsound. **CO5**: Appraise the narrative efficiency & richness with the use of metonym & metaphor.

Media Education

CO1: DescribeMedia, newmedialiteracy,mediamessage.
CO2: Recognizecommunity,society, democracyand thererolein media.
CO3: Generalizethethinkingaboutbehaviour&consequencesinmedia.
CO4: Analyse thethinkingaboutthe healthissues(tobacco,alcohol&drugs)portrayedbymedia.
CO5: Develop teachingmethodologiesofproject based learning asprojectedby media.

EnvironmentalStudies&Gender Sensitization

CO1:**Understand**theimportanceofEnvironmentaleducation,conservationofnaturalresources & understand the importance of ecosystems and biodiversity.

CO2:**Understand**thepollutionproblemsandapplytheenvironmentalscienceknowledgeon solid waste management, disaster management.

CO3:**Apply**theenvironmentalscienceknowledgetoimprovetheresourcesandEvaluateand understand the sustainable environmental conditions and control methods.

CO4: **Identify** the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality,andsoon)andassesstheways inwhichtheycontributetoinstancesofprivilege and power dynamics across cultures, space, and time. And their problems.

CO5: **Understand** the gender problems and ways of addressing them, including interactions across local to global scales in communities and overcome inequalities with legislations**.**

VideoEditing(Premier&SoundForge)

CO1: Describethe Historicaldevelopment of editing.

CO2: Explainstagesofediting,selectionofshots,assembly&finecut,principlesofcontinuity editing.

CO3: Create basic transitionslikecut,dissolve,fade in,fade out,andintercut,crosscut,jumpcut.

CO4: Dothetitlesandcreditsusinglinear,onlinear,offline,onlineeditingthroughfinalcutpro and avid.

CO5: Dothesoundeditingusingnonlineareditingtechniques,capturing&importingfootage.

VisualAestheticsandAnalysis

CO1: Define&describesVisualmessageandmeaningsdifferent perceptionsofvisualmessages.

CO2: Classify,explain&interpret theNavarretetheoriesandprinciplesofArt.

CO3: Explain&defendthemajor artmovementinIndia and inthe Westerncountries.

CO4: Analyse&compareSignscodes,connotations,image,semiotic,syntagmaticand paradigmatic approach.

CO5: Compare,criticize&judgetheGenderissuesalongthePsychoanalytic&Feministic approach.

Introductionto Advertising

CO1: Describeevolutionofadvertisinginindia&World.Defineadvertisingmeaning,objective, need & role.

CO2: Classifythedifferenttypesofadvertisingmedia,product,andservice, institutional/corporate, PSA, financial, global industrial.

CO3: CompareAAAI, ASCI,IMRB,ABC,NRS,TRP,Pre-testandpost-testmethods,digital media, communication technology.

CO4: Identify creativityinadvertising,needs ofresearchinadvertising.

CO5: AppraiseCopyrightAct,Nationalsymbolsandemblemsact,Ambiguousadvertising, Vulgarity in advertising, Ethics and Codes of advertising

Introductionto Gaming

CO1: Identify HistoryofGamingindustry,introductiontodifferenttypes ofconsoles/platforms.

CO2: ExplaintheDesigndocument,typesofdesigndocument,Gameplaymechanics,platforms and its limitations.
CO3: Differentiateisometricview,sidescrollingandopenworldgames,typesofgame generes.VR, AR and MR.
CO4: InterpretMayaLT&Unity3Dbasicuserinterface,roleoflighting&VFXfor gaming
CO5: Explainspineanimation,spritesheet,textureatlas,openGI.

Compositing(After Effects)

CO1: Identifyuserinterfaceforcompositing,ViewsandPreviews,LayersandProperties& Animation, Colours, Masks, TransparencyandKeying, Text, Drawing and Painting, Motion Tracking, EffectsandAnimation, Pre-sets, RenderingandExporting.
CO2: Differentiate ImageBasedMotionGraphics&VideoBasedMotionGraphics
CO3: CreateEffects&Title effects.
CO4: Docolourcorrection&Keyingaftereffectstools.
CO5: UseMatchmover,MotiontrackingOverview,MotionTracking,WorkflowandControls, Rotoscoping , Wire Removal.

Digital Advertising

CO1: IdentifyDigitaladvertisingFundamentals,AdWordsUserInterface,andStrategicflow for Ad activities.
CO2: Explain Facebook advertising Fundamentals. Profiles and pages, business categories, getting assets ready. Creating Facebook pages, Page info and settings. Pin post and highlights,Schedulingposts.Facebookevents,Replyandmessages,Facebookinsights reports.
CO3: ExplainVideoFlow,GooglePagesforYouTubeChannel.ChannelART,ChannelLinks, Channel Keywords. Branding Watermark.
CO4: ProduceVideosforYouTubewiththeknowledgeofCameraAngles,SettingupLightings, Shooting Techniques.Editing Videos, Editing Audio, Background Music.White Board Animation, Publishing HD Videos
CO5: CreatingAnimatedContents,DesigningImageAds.CreatingAnimatedAds,Exampleson Animated Ads, Creating Video Ads.Hi-Jack Competitor's Video Audience Practical Examples.

CorporateCommunication

CO1: Describe Concept, Definition, Nature, Scope Functions of PR Role of PR, Historical perspectiveofPR,CorporateCommunicationandPublicity,Propaganda,Advertisingand Lobbying.
CO2:Explain CorporateCommunication Publics;Internal and External, Corporate communicationProcess;FourstagesofCorporateCommunicationCorporate Communication Consultancy and Counselling.
CO3: Explain Tools of Corporate Communication; House Journals, Press Release, Press Conference,PlannedTours,Brochures,Posters,OpenHouseExhibitions,Audio-visualAid, TV, Film, Radio, Video and Demonstrations
CO4: Apply Corporate Communication and Management, Employee Relations, Financial Relations, Consumer Relations MediaRelations,CorporateCommunication in Crisis Management, Case Studies

CO5: EvaluateCorporateCommunicationPrograms,EventManagementProcess&Techniques, Broadcasting; Genesis and Growth of media units in Central Govt.Corporate Communication Research.

Digital Painting

CO1: DescribeDigitalpainting.PhotoshopBasicswithWorkspaceusingPhotoshopand Photoshop Vector Tools.

CO2: ExplainRoleofcolourindigitalpaintingandcolourtheory. Createanoriginalvehicle concept Drawing utilizing the techniques learned in the previous exercises

CO3: ExplainAdvancedPaintingTechniques.Creatingtheillusionofvolumeandspacewithlight and shadow.

CO4: PaintDigitallya Fantasy orScience FictionCityinPerspective.

CO5: Explainblend&shading.Layers,touchup,detail,blending,filters.CustomBrushesfor Rock, Metal, Stone Textures, Trees, leaves and Branches.

ProductionManagement

CO1: Explain,expressdemonstratetheworkflowin2D/3Dproductionhouses.

CO2: Shows&interrelate thebasicpreparationformodellingdemoreel.

CO3: Planhowto makea scene foranimation.

CO4: Planhowtocombinehardware particlesfor a scene.

CO5: FormulateDynamicrelatedvisual Effects.

TheatreArts

CO1: IdentifyOriginanddevelopmentofIndianTheatre,TheatreArts,theElementsofTheatre, and History of Theatre Arts & Theatre for personality development.

CO2: ExplainFolkArt WorkingonBody,Mind,Voice,Improvisation andimagination.

CO3: ApplyTheatredesign-Direction,StageMgt&SetsandPropsCostumes,LightandSound, Backstage, theme, Creating a framework and script, designing Stage management, Budgeting and Marketing.

CO4: Createmasksforstockcharacters.Costumesandmake-up,stopmotion,puppetry, Incorporating dialogue and acting.

CO5: Analyseplay,ProductionDesignandArtDirectionStory, PlotandThemes,Symbols, Character Development.

B.A.Psychology,English,Journalism

PSO1: Understandthenatureandbasicconceptsof Psychology,Englishliterature,and Journalism and express them effectively in writing and speech.

PSO2: Analysetherelationshipbetweenindividualandsociety,andthevariousways individuals respond to socio-political-religious and economic factors.

PSO3: Think critically about arguments and texts while taking into account diverse interpretationsfromdifferentsubjectpositionsandacquiretheabilitytoactinasocially

responsible,ethicalandhumaneway,groomingthemselvestowardseffective citizenship.

PSO4: Apply the theories of Psychology, English Literature, and Journalism in conducting investigationsoncomplexproblemsconcerningthehumanbeing,hisbehaviourand existence in society.

English-I

CO1:Identifythevarious rolesofeditorsinanewspaper agency.

CO2: Identify and apply the various techniques of good news writing.**CO3**:Identifyandapplytherulesofwordusagethroughspecificexample s. **CO4**: Judge the importance of chronology in a news story.

CO5:Composebetter introductions.

IntroductiontoPsychologyI

CO1:Understandvarioushistoricaland modernperspectivesof Psychology.

CO2: Explain the biological foundations of human behaviour.

CO3:Analyzethemechanismsofhumansensationandperception.

CO4: Explain the principles of learning

CO5:Classifythevarioustypesof memory

IntroductiontoEnglishLanguageandLiterature

CO1:Identify characteristicfeatures andcausesofgrowthoftheEnglish language

CO2:AppraisethehistoricalandliterarY aspectsoftheAgeofChaucerandShakespeare

CO3:PointouttheliterarycontributionsofChaucer andShakespeareinthecontextofthe Middle English age and the Elizabethan Age respectively.

CO4:Appraisethehistoricalandliterary aspectsofthePuritan,Restorationand Augustan ages.

CO5:AppraisehistoricalandliteraryaspectsofthePre-Romantic,Romantic,Victorianand Modern ages.

IntroductiontoCommunication andJournalism

CO1:Understandandanalyzetheroleofcommunicationand variousmodelsof communication.

CO2:Understand theconceptofmasscommunicationandthehistoryofmassmediainIndia and compare different forms of mass media

CO3:DiscussanddifferentiatethetypesofcontemporaryNewspapersandmagazinesinEnglish and Telugu.

CO4:Learn andDifferentiateTypesofNewspapersand Magazines

CO5: Appraise andunderstandtheethicsof Journalism.

EnglishII

CO1:Identifythestructure ofanewsstory.

CO2:Classifybackgroundtonewsstoriesasbackgroundforinterestandbackgroundfor intelligibility and compare the two kinds of background.

CO3:Identify thefeatures ofnews featuresediting.

CO4:Analyse thevarioustechniquesofeditingandrewritinga newsstory.

CO5:Applythe principlesofeditingonvariousnewsstories.

TextualTaxonomy oftheLiterary Genre

CO1:Interpret thebasicpoeticterms,forms,devices.

CO2: Analyse the purposes of and gauge appropriate responses to rhetorical tools.

CO3:Applythebasicsofdramaticart,primarytypesofdramaanddramaticdevices. **CO4**: Analyse the different types of essays and novels.

CO5:Survey genresoftheshortstory,thebiographyandthe autobiography.

IntroductiontoPsychologyII

CO1:Analyzethefundamentalprocessesunderlyinghumanbehaviorsuchasthinking, intelligence

CO2:Understandthebasictheoriesofhumanmotivationandemotion.

CO3: Apply the principles of psychological testing.

CO4: Evaluate various theories of human personality.

CO5:Understandalteredstatesofhumanconsciousness**.**

MiddleEnglishandElizabethanAge

CO1:Identify thesocio-politicalfeatures oftheMiddleEnglishagethrough literarystudy.

CO2:Identifyandanalyseliterary, social,culturalandhistoricalcontextsthroughastudyof Chaucer's 'The Canterbury Tales.'

CO3:Identifyandanalyseliterary, social,culturalandhistoricalcontextsthroughastudyof Marlowe's 'Dr. Faustus.'

CO4:Identifyandanalyseliterary, social,culturalandhistoricalcontextsthroughastudyof Shakespeare's selected sonnets and his dramatic comedy.

CO5:Identifyandanalyseliterary, social,culturalandhistoricalcontextsthroughastudyof Bacon's selected essays.

IntroductiontoSocioPolitical India

CO1:Understand theconceptofIndiansocietyandanalysethesocio-culturalchangesin contemporary India.

CO2:Analysetheconstitutionalrights,dutiesandthestructure ofIndianGovernment.

CO3:IdentifyvariousmarginalizedgroupsinIndiaandtoassesvariousbeneficialpolicies implemented by the government.

CO4:Understand theconceptandtypesofhumanrightsandsubdividetheroleofUNandother NGO's in preserving them.

CO5:Identifyandanalysevarioussocial,culturalandeconomicimpactsofGlobalizationonthe Indian society.

Communication Skills/ Career Skills/ Psychology for Living

CO1: Understand the relevance of psychology in everyday life.
CO2:Explaintheimportanceofselfandrelationshipsinone'slife.
CO3:Identify varioustypes ofdisintegrativeexperiencesindailylife.
CO4:Appraiseuponthemechanismsofgrowth andself actualization.
CO5:Evaluate the importanceofrecognizingandmanagingemotionsinoneself andothers.

EnhancingPsychologicalCompetencies

CO1:Understandtheimportanceandtheneed toenhancepsychologicalcompetencies
CO2:Analyzethemechanismsofhope,optimism,resilienceandsubjectivewellbeing
CO3:Explain theworkingsofanxiety,depression,stressand copingmethodsineverydaylife.
CO4:Explainthemeaningandnatureof emotions.
CO5:Evaluate themeaningandnatureofpro-socialbehavior

Statisticsin Psychology

CO1:Explainvariousmethodsofdata representation
CO2:Analyzethemeasuresofcentraltendency
CO3:Understandtheconcept ofnormaldistributioncurve.
CO4:Explain thesignificanceofmean.
CO5:Identify varioustypesofcorrelation methods.

Ageof Milton,DrydenandPope

CO1:IdentifythepoeticcharacteristicsofMiltonandDrydenandsituatethemintheliterary scenes of the Puritan and Restoration ages respectively.
CO2:DistinguishthepoeticfeaturesuniquetoMetaphysicalpoetryandunderstanditsunique place in the literature of its time.
CO3:ShowDonne,MarvelandHerbert'splaceintheuniverseofMetaphysicalpoetryand assess their contributions as metaphysical poets through a study of select poems.
CO4:Identifyandanalyseliterary,social,culturalandhistoricalcontextsofPre-Romantic poetry through a study of Gray's elegy.
CO5:Identifyandanalyseliterary, social,culturalandhistoricalcontextsoftheAugustanage through a study of Pope's mock epic.

NewspaperManagement

CO1: Identify anddiscussvariousownership patternsofmassmediainIndia.
CO2:DiscusstheorganizationalstructureandCategorisethefunctionsofvariousdepartmentsin a Newspaper organization.
CO3:Appraisetheroleof variousApexbodiesinmedia sector.
CO4:Assessandcriticizethevarious presslawsandactsinIndia
CO5:Distinguishandunderstandtheproblemsofsmallnewspapersandlargenewspaper organization.

EnhancingPsychologicalCompetencies-II

CO1:Understandtheimportanceofpsychological competencies.

CO2:Applythe mechanismsofmindfulness.
CO3: Analyze the benefits of critical thinking, reasoning and logic.
CO4:Identifythereasonsforenhancingpsychologicalcompetencies.
CO5: Appraise the psychological challenges in contemporary life.

PersonalityTheoriesandassessment

CO1:Understandthevariousfactorsinfluencingpersonality
CO2:Analyze majortheoreticalperspectivesofpersonality.
CO3: Explain the trait and type theories of personality.
CO4:Applyvarious methodsofpersonalityassessment
CO5:Classifyvarious types ofpsychological tests.

TheVictorianAge

CO1:Toclassifythewritersandtheirwritingswithrelevancetotheirgenresandtocreatea sound understanding on the background to the age.
CO2:Tosketchthefunctioningoftheagewithspecific referencetotheliterarygenre *Drama*
CO3:Todemonstratetheirreadingskillsintheliterarygenreofthe*Novel*andfurtherbeableto visualize and relate to the happenings in the age through the fiction.
CO4:Toanalyzeandinterpretthethought,complexitiesandpoeticaldevicesintegratedinthe literary genre *Poetry*.
CO5:T**o**criticizetheliterarytextshavinganorientationtothecriticalperspectivesfunctionalin the Victorian era.

NewLiteraturesinEnglish

CO1:Recognizethebasicconceptsandfeaturesofcolonialandpost-colonialliteratureand apply related literary terms.
CO2:Comparediversepost-colonialanglesthroughthepoetryofAngelou,Hopeand Ramanujan.
CO3:Analyze theimportanceofChinuaAchebeasapost-colonialnoveliststhroughastudyof 'Things Fall Apart.'
CO4:PraisetheimportanceofWoleSoyinkaasapost-colonialdramatistthroughastudyof 'The Lion and The Jewel.'
CO5:Comparediversepost-colonialanglesthroughtheshortstoriesofGabrielMarquezand Patrick White and the essays of Emerson and Walker.

HistoryofIndianPress

CO1:Understand theevolution,appraise variousrolesof press.Understand thehistoryand origins of Press and Point out the role of journalists in the Indian freedom movement.
CO2:Identifytheoriginanddevelopmentofregionalpressselectingvariouscontemporary newspapers.
CO3:Identifytheoriginanddevelopmentofregionalpressselectingvariouscontemporary newspapers.
CO5:Understandandcriticizetheimpactofglobalizationandcorporatizationonindianpress

ReportingandEditing

CO1:Understandtheconcept ofreporting andsurveyvariousprivilegesandduties ofa reporter.

CO2:Assess andInterpretthe elements,structure andthetypes of News.

CO3:DiscussandJudge thetechniquesofreportingandartof editing.

CO4:Identifythetypesof headlinesandthe functionsof editorial.

CO5:Analyse thelayoutof thenewspaperwithemphasisonpicture editingandpage makeup.

OrganizationalBehavior/HealthPsychologyAdvertising/OnlineJournalism

CO1: Understand the concept and challenges of Organisationalbehaviour

CO2:Explainvariousmethodsofpersonnelselection

CO3:Identifyvariousfactorsinfluencingproductivityandjobsatisfaction.

CO4:Analyze theeffectsofnoiseandfatigueinthephysicalenvironment. **CO5**:
Evaluate various techniques of stress management.

Advertising/OnlineJournalism

CO1:Discussandconstruct theoverview ofonlinejournalismaroundthe world.

CO2:Identify thevarioustoolsofonline journalism.

CO3:Assesstheconceptsofcitizenandparticipatoryjournalism.

CO4:Analyse therole ofnew mediaandsocialnetworks.

CO5:Understandandappraisethesecurityandethical challenges inonline journalism.

SpecializedReporting

CO1:UnderstandandJudge therole ofmediainreportingcrime.

CO2:Describe theprinciples ofPoliticalreportingandmedia'sroleinshapingpublic opinion.

CO3:UnderstandandAnalyzenationalpoliticsand Indianjudicial system.

CO4:Analyse thetechniques ofsportsreporting.

CO5:Understandfashionjournalismandappraiseworking infashionjournalism

AbnormalPsychology

CO1:Classifyvariousformsofabnormalbehaviour.

CO2:Explainvarioustypesofanxietyandsomatoformdisorders

CO3:Identifyvarioustypes ofmooddisorders.

CO4:Analyzethecharacteristicsofvarioustypes ofpersonalitydisorders.

CO5:Understandthevarioustypesof therapiesinpsychology

RomanticAge

CO1:ComparethesocioпolitcalfeaturesoftheRomanticAgewiththepreviousagethrough the ideological differences.

CO2:Assess theenvironmental ethics ofColeridge'sThe RimeoftheAncient Mariner. Analyse ideological,social,culturalandhistoricalcontextsthroughastudyofpoetryofShelleyand

Keats.

CO3:Illustrate thesocialissuesof theage withreference to'The ChimneySweepers.'

CO5:IdentifytheconstructionofgenderandtheideologicalassumptionsoftheRegencyPeriod through a study of Austen's 'Pride and Prejudice.'

IndianWritinginEnglish

CO1:IdentifyIndianWritinginEnglishasadistinctapproachtoEnglishliteraturefromthe Indian perspective.

CO2:RecogniseandanalyseIndianEnglishwritingthemes,historicalbackground,major writers of fiction, Non-Fiction, Poetry and Drama.

CO3:Identifyandanalyseliterary, social,culturalandhistoricalcontextsthroughastudyof Narayan's 'The Guide.'

CO4:Analyseliterary, social,culturalandhistoricalcontextsthroughastudyofselectedIndian English short stories.

CO5:AnalyseselectedIndianEnglishpoemsbyrepresentativewriterstoformanunderstanding of literary, social, cultural and historical contexts.

AmericanLiterature/PopularLiterature

CO1:Appraise thescopeofpopularliteratureinliterarystudiesandanalysethemaingenresof Popular literature.

CO2:Distinguishfolkliteratureasadistinctgenreofliterarystudiesandcompareitsdifferent forms.

CO3:ClassifyHorror,detectivefiction andthrillerasdistinctgenres ofpopular literature.

CO4:Identifythebasicconceptsofsciencefictionasaliterarygenrethroughastudyoftwo representative texts.

CO5:Differentiatebetween comicsandgraphicnovelsand analysetheirliterary features.

PublicRelations&CorporateCommunication/EditorialWriting

CO1:DefinitionPRandAnalyzevariousfunctionsandtypesofPublicrelationsinan organization

CO2:AnalyzetheRoleofPRinMassmedia andUnderstandFourKeystagesofPR

CO3:LearnandcategorizePublicRelationtoolsandunderstandAnticipatoryPR–Crisis management – Image management - event management

CO4:Discuss Mediarelationsandinfercoordinationwith media

CO5:IntroductiontoE-CommunicationandCategorizeE-Journals,Websites,Intranet,Blogs and Web-based Media

SocialPsychology

CO1:UnderstandthemethodsofSocialPsychology.

CO2:Explain varioustheories of attribution.

CO3:Evaluatevarious theoriesofattitude formation.

CO4:Understandthenatureand variousfactorsinfluencing pro-social behaviour.

CO5:Explainthedeterminantsofhumanaggression.

DevelopmentalPsychology

CO1:Understandtheconcept ofhumandevelopment.
CO2:Explaintheprocessesofchangeoccurringduringstageofprenataldevelopmentand infancy.
CO3:Evaluatevarious aspectsofbiologicalandpsychosocialdevelopmentin childhood.
CO4:Analysevarious biologicalandpsychologicalchangesoccurring during adolescence.
CO5:Identifytheroleoffamily,peersandcommunityininfluencingdevelopmentinvarious stages of adulthood.

LiteratureofModernAge

CO1:Appraise thecontributionofrepresentativeModernEnglishpoetsthroughastudyoftheir selected poems.
CO2:AnalysethefeaturesofModernEnglishessays throughastudyofWoolf'sandGardiner's essays.
CO3:Appraise thecontributionofEMForsterasamodernnovelistwithreferencetohisnovel 'A Passage to India.'
CO4:IdentifyandanalysethefeaturesofModernistshortstoriesthroughastudyofselected short stories.
CO5:Identify issuesofclassandlanguage inShaw's'Pygmalion.'

B.ComHonoursStrategicFinanceS
em 1

BusinessEnglish–I

CO1. Studentswillbeabletoidentifyelements,formsandstyleoflettersandwillbeabletocreate quotations related to inviting, sending and placing orders.

CO2. Studentswillbeabletoidentifyqualitiesand functionsofaSalesLetterinordertoenablethem use the format of a Sales Letter.

CO3. Tounderstandandwritethefunctions,structureandtypesofmemorandumanddesignanotice, agenda and minutes.

CO4. Todemonstratetheguidelinesforansweringandmakingeffectivetelephonecallsinorderto enable understand and implement Note making.

CO5. Tohaveabetterunderstandingofscanningandproof-readingincomprehension.

FundamentalsofBusinessMathematics

CO 1. To solve linear equations.

CO2. Togetsolutionsofreal-life problemsbyusinglogarithmsandsettheory.

CO3. To solvetheproblemsin businesslinelikebanking sector.

CO4. Togetmaximumprofitandminimumlossincompanyproductivity.

CO5. Tomeasure areas&volumes

FundamentalsofInformation Technology

CO1. Understandbasiccomputerterminologyandnumbersystem.

CO2. Explain about operating systems, and its types.

CO3. IdentifydifferentapplicationsofInformationtechnology.

CO4. Classify phases of Software Development Life Cycle

CO5. Categorizemodernmeans ofcommunication,types ofnetworksandtopologies.

FinancialAccounting-I

CO1. Describestheneed andimportanceof accounting.

CO2. Explainsaboutsubdivisionof journal

CO3. Comparesthecashbookand passbookbalancesto reconcilethe difference.

CO4. Analysesthefinancialpositionofan organization

CO5. Identifiesthemistakes inbooksofaccounts andhelpsincorrectingthem.

FinancialPlanningandPerformance

CO1. Tounderstand strategicplanningandbudgetingandrecallthemodelswithprocess.

CO2. Toclassifyforecasting techniquesand demonstratethebudget.

CO3. Toprepareanannual profitplan.

CO4. Toanalyseperformancemeasuresbyusingflexiblebudgetsandcompareactualresultstoplanned results.

CO5. Toproposeperformancemeasureand discusskey performanceindicators.

SEMII

BusinessEnglishII

CO1. Studentswillbeabletosynthesizethetheoreticalknowledgeofbusinesscommunicationthrough report writing and letter writing.

CO2. Studentswillbeable toidentifytheelementsof ClaimandAdjustmentletters.

CO3. Studentswillalsobe abletodraftclaimlettersandadjustmentletters.

CO4. Theywillbe abletoidentifynature andtypesofcreditletters.

CO5. Studentswillbeabletorecognisetoneandstyleof CollectionLetters.

CO6. Studentswillcomprehendthegeneralguidelines towriteapplicationlettersandresumes.

ValueEducationAndPersonality Development

CO1. StudentswillbeabletoidentifyAcceptednormsandCountervaluesandwillbeabletodifferentiatethe various Dimensions of Human Development.

CO2. StudentswillbeabletodemonstrateLoveandExperienceofGod.

CO3. TheywillbeabletoidentifytheBasicIssuesofLifeandHappinessasalifegoal.

CO4.They willabletounderstandtheimportanceofConcernfor othersandcritiquethevariousproblemsthat deter the growth of the society.

CO5.Thestudentswillbeabletorecognizethetraitsofagoodpersonalityandtheywillbeable identify their personality by Self-Exploration

CO6. Studentswillbeable tointerpretthe PurposeofLife andGoalSetting

ManagerialEconomics

CO-1 Todefinemanagerialeconomicsandtodescribetheeconomicconcepts,tools,andpracticesused in managerial economics.

CO-2 Toexplaindemand analysisandtoapplydemandforecastingmethodsbased onnature of product.

CO-3 Toanalyse input-outputrelation indifferenttime periods.

CO-4 Toidentifyand distinguish differentmarketstructureinprice–outputdecision.

CO-5 Tocomparedifferentpricing strategies.

FinancialAccounting–II

CO1. Introducestothebasicconceptsofpartnershipandexplainstheadmissionofapartner.

CO2. Demonstrates theaccountingtreatment relating toretirementand deathofa partner.

CO3. Identifies the rules applicable for winding up of partnership and insolvency of a partner.

CO4. Showsthemethodoffindingoutprofitsandfinancialpositionbyusingincompleterecords. **CO5.**

Illustrates method ofpreparing books underHire purchaseand instalmentpurchase system.

Financial control

CO-1 Todefinecostbehaviour andtypesof costs.

C0-2 Toclassify costingsystemsandcomparedifferenttypesofcosts.

CO-3 Tosolveproblemsinsupplychainmanagement.

CO-4 Tocriticizeandconcludethebasisofinternalauditing.

CO-5 Todevelopandcreate abusinesscontinuityplan.

FundamentalsofBusinessStatistics

CO1: Organize,manageandpresentdata.Canrepresentthestatisticaldataindiagrammatic and graphical form.
CO2: Calculatemeasuresofcentral tendency.
CO3: Analyse thedatausingmeasuresof dispersion.
CO4: Evaluatethenaturefor thestatisticaldatausingskewnessandmoments.
CO5: Determinetherelationbetweenanytwofactorsusingtheconceptsofcorrelationand regression analysis.

SEMIII

AdvancedStatistics

CO1: Derivetheprobabilitymassanddensityfunctionsofrandomvariablesandthento calculate mean and variance.
CO2: Identifythecharacteristicsofdifferentdiscretedistributionslikebinomial,poissonand negative binomial distributions.
CO3: Abletoperformandanalysehypothesistestsofmeans,proportionsandvariances using both one-and two-sample data sets.
CO4: Abletoapplytheappropriate chi-squaredtestforindependenceandgoodnessoffit.
CO5: Demonstrateunderstandingoftheconceptsoftimeseriesanditsapplicationsin different areas.

Ecommerce

CO1. Tomeasureareas andVolumesdescribeelectroniccommerceframeworkand WWWarchitecture.

CO2. Classify mercantile process models and types of electronic payment system.

CO3. ApplyEDIimplementationsandanalyseintraorganisationalelectroniccommerce.

CO4.Design corporate digital library, advertising and marketing on the internet.

CO5. Identifyconsumersearchand resourcediscovery, ondemandeducationanddigitalcopy rights.

FinancialReporting

CO1.Studentswillbeable topreparefinancialstatementsaccordingtoUSGAAPandIFRS.

CO2. Students will be able to appropriately account and report assets and liabilities.

CO3.Studentswillbeabletodevelopconceptualunderstandingonequitytransactions. **CO4.**

Students will be able to recognize revenue recognition principles.

CO5.Studentswillbeable toanalysereportsonfinancialstatements.

DirectTaxes

CO1: Tounderstandthebasicdefinitionsofincometax,agriculturalincome,residential status and exempted incomes.
CO2: Toshowthecomputationofincomefromtheheadsalariesandhousepropertyasperit act.
CO3: Toidentifytheincomefrombusiness,professionandcapitalgains.
CO4: Tocomputetotalincomeof individualsand HUF.
CO5: ToassessthetaxliabilityofindividualsandHUFasperITact.

FinancialDecision Making

CO1. StudentswillbeabletounderstandaCommonsizefinancialstatementandrecallandrelatethe financial ratios.
CO2. Studentswillbeabletoidentifytherelationshipbetweenriskandreturnandutilizetheknowledge of long-term financial management.
CO3.Studentswillbeabletoexaminefinancialmarketsandregulationsandanalyseworkingcapital management.
CO4.Studentswillbeable toexplainmergersandacquisitions,bankruptcy.
CO5. Studentswillbeabletoanalysecorporate restructuring.

SEMIV

EconomicEnvironmentofBusiness

CO1: Todescriber changingdimensionsofbusinessenvironment.
CO2: Selectkeymacroeconomicindicatorsanddifferentiatebetweeneconomicgrowthand development.
CO3: Toanalyse problemsandpoliciesofIndianindustries.
CO4: Tocomparemeritsand demeritsofforeign capital inIndianeconomy.
CO5: Tocombinevarious businessregulationsforeffectivecorporate governance.

CorporateAccounting

CO1: To understand the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofits before incorporation.
CO2: Explainsthevaluationof sharesandgoodwill.
CO3: Analysesamalgamationinthenatureofmergerandpurchaseandaccountingtreatment for internal reconstruction.
CO4: Demonstratestheaccountingsystemsofabankingcompanyunder theguidance ofrbi.
CO5: HelpstoprepareinsuranceaccountsasperIRDAI guidelines.

PrinciplesofManagement

CO1: Toidentifyand interpretthevarious principlesandimportanceof management
CO2: Toexplainanddemonstrate theusesofplanningandorganizing
CO3: Toclassify andcombinethevarioustechniquesofcontroland coordination.
CO4: Topointoutanddevelopthe essence ofmotivationanddirectiontothestudents

CO5: Tointerrelateandunderstandtheessenceofleadershipandtheimportanceof Communication

FinancialDecisionMakingII

CO1. Studentwillbeabletodefinemarginal,sunkandopportunitycostsandrecallcostvolumeprofit analysis.

CO2. Studentwillbeable todemonstrateunderstandingofpricingmethodologies.

CO3. Studentwillbeabletoidentifyasystemofinvestmentdecisionanddevelopstageofcapital budgeting.

CO4 Studentwillbeable todemonstrateunderstandingenterpriseriskmanagement.

CO5. Studentwillbeabletounderstandtheimportanceofethicsformanagementaccountingand financial management professional.

ResearchMethodology

CO1: Tounderstandandinterpretthebasicmeaningofresearch,todefinetheresearch problem at hand and construct the procedure for undertaking research.
CO2: To formulatehypothesisanddevelop anappropriateresearchdesign.
CO3: Toclassifythedifferentsourcesofdataandanalysethevariousmethodsofdata collection.
CO4: Todevelopthemostappropriatesamplesizeanddesignaswellasdeterminationof sampling and non-sampling errors.
CO5: Toclassifythevarioustypesofattitudemeasurementscalesandappliestheprinciples and format of report writing and presentation.

SEMV

MarketingManagement

CO1: Explainstheconceptof marketingandsketches themarketingenvironment.
CO2: Classifiesthemarket andidentifiesthevarious marketsegments
CO3: Pointoutsthemarketingmixwithreferencetoproductandprice **CO4:**
Analyses the promotion mix and the channels of distribution.
CO5: Explainsservicemarketingmixandpointsouttheimportanceofdirectandonline marketing.

AdvancedCorporate Accounting

CO1: Toexplainlegalprovisionsofholdingcompany'sunderscheduleiiiofcompaniesact and preparation of consolidated balance sheet.
CO2: Toshowthecapitalstructureofholdingcompanyandsubsidiarycompaniesand preparation of accounts relating to intercompany transaction.
CO3: Toanalysepublicutilitycompany'sdoubleaccountingsystem.
CO4: Todifferentiatebetweenoperating andfinancial lease.
CO5: Toappraisetheliquidationprocessofthecompany through preparationofstatementof

affairs,deficiencyaccount,liquidatedfinancial statement.

InternationalMarketingandExportManagement

CO1: Analyzetheprocessofinternationalmarkets andclassifyIndia'sexporttrade
CO2: Describetheimportantfactorsofinternationalmarketingenvironmentanddifferentiate marketing research, market selection, and market segmentation
CO3: Analyzetheimportanceof productanddistributionstrategies
CO4: Differentiatetheneedforpromotionmixstrategiesand pricingdecisions
CO5: Explainforeignexchangestrategies,differentiatebalanceofpaymentsandbalanceof trade, and interpret international economic organizations

CorporateGovernanceandBusiness Ethics

CO1: Identifyandexplaintheimportance ofvaluesand ethics.
CO2: Analyzeand interpretthevarioustheoriesofethicalvalue system.
CO3: Pointouttherelationshipbetweenlawandethicsandunderstandtheimpactoflawon the business.
CO4: Explainthecorporategovernance codes,transparencyanddisclosure inthe corporate.
CO5: Identifyandpointoutthe globalissuesof governance.

BankingTheoryandPractice

CO1: To identify and illustrate the origin and growth of banking in India.
CO2: To interpret the features of various types of negotiable instruments.
CO3: Todemonstrateandapplythestepsinvolvedinopeningabankaccount.
CO4: To appraise and criticize the various types of collateral securities and point out the precautionstobetakenbyabankerwhileadvancingloansagainstdifferenttypesof securities.
CO5:Tounderstandtheorganizationalstructureandfunctionsofco-operativebanks,NABARDand RBI.

BusinessLaw

CO1:Demonstrate an understandingofthelegalenvironment ofthe business.
CO2:Explainslegalityofobjectandconsideration,dischargeofacontractandremedies available.
CO3:Identifytherecognitionoftransactionsinvolvingthesalesof goodsact.
CO4: Dramatizetheapplicationofconsumerprotectionact.
CO5:Torecognizeintellectual propertyrightsandintroductiontoitact2000andrightto information act.

DatabaseManagement System

CO1.UnderstanddatabasedesignusingE-Rdiagram
CO2.Classify normalization and relational algebra.
CO3.Create database tables to implement queries.
CO4.Analyseprocedurallanguageand storagemedia.
CO5.Evaluatetransactionsand itsrecovery system.

EntrepreneurialDevelopment

- Toserve asaninvaluableguide forstudentswhowanttoenterintoentrepreneurshiparena.
- Tocreateanddevelopqualitiesofleadershipandmotivatehiddentalentsofentrepreneurship embedded in the minds of students.

SEMVI

FinancialMarketsandInstitutions

CO1: Toclassify aboutfinancialmarketsandservices.
CO2:Toexplainaboutthecapitalmarketswithreferencetostockmarketasper SEBI regulations.
CO3: Tosketch theworkingofmoneymarket intheIndianfinancialsystem.
CO4: Toanalysethederivatory and depositorysystem.
CO5: Toappraisefinancialservicesystem relatingtomutualfundsandmerchantbanking.

HumanResourceManagement

CO1: Tounderstand theconceptofHRM,functionsand changingrole ofaHRmanager
CO2: Todistinguishbetweenthevariousmethodsofjobdesignandinterpretthetechniques of acquisition of human resource.
CO3:ToexplaintheimportanceofHRPandpointoutthevariousHRDapproachesforwork life balance and describe the concept of job evaluation.
CO4: ToanalysethecoreconceptsofHRD,TQMandunderstandtheconceptofcareer development.
CO5: Toexplainthe variousconceptsofworker'sparticipationandqualityof worklife.

AccountingforManagement–II

CO1: Tofindandunderstandtherelationamongcost,volume&profit
CO2: Enable thestudentstoprepare variouskindsofbudgets.
CO3: Tosolvelinearprogrammingproblems, transportationproblems.
CO4: Tounderstandresponsibilityaccounting,humanresourceaccounting&inflation accounting.
CO5: Tocreateandwritethevariousreportstoprovidetherequiredinformationfor management.

LabourLaw

CO1: Tounderstandvariousprovisionsoffactoriesact.
CO2: To explain the rules regarding workmen compensation and provident fund act.
CO3: Toillustratethegrossprofitsofabankingcompanyandnon-bankingcompany. **CO4:**
To show various adjudication machinery.
CO5: Tellsaboutrights,dutiesandliabilitiesofregistered trade unions.

AuditingandAccounting Standards

CO1: To understand the basic concepts of auditing and the nature and scope of auditing.
CO2: Toorganizethevariousstepsinanauditingprocessandpointoutthetechniquesof vouching of cash payments and receipts.
CO3: To analyzethefeaturesandimportanceofinternalcontrol, check andaudit.
CO4: Topreparedifferenttypesofauditreportsandexplaintheprocedureforappointment and removal of a company auditor.
CO5: Tounderstandtheregulatoryframeworkinwhichaccountingstandardsareformulatedand operated

CompanyLaw

CO1:Todevelopbasicknowledge ofprovisionsofcompaniesact2013.
CO2:Todescribethecapitalstructureofcompanythroughissuesofsharesandalterationof share capital.
CO3:Explaintheborrowingpowersofacompanyandconsequencesofultravires borrowing.
CO4:Statevariousprovisionsofthecompaniesactrelatingtocompanymanagementand meetings.
CO5:Toidentifyvariousmodesofwindingupandlegalprovisionsapplicable.

IndirectTaxes

CO1: Todescribebasic schemeof GST,GSTcouncilpower andfunctions.
CO2: ToexplainvariousGSTactsandalsovariousdefinitions
CO3: Toidentifytheregistrationprocedure,levyingofGSTandexemptions
CO4: To analyse different types of assessments and returns under GST
CO5: To appraise the EXIM procedure as per customs legislations in India

B.Sc.ComputerScience&CognitiveSystems

GENERALENGLISH-I

CO1:Todistinguishbetweenwordswhichareeitherspeltorpronouncedalike,yetrenderdistinctmeanings; imparting a sound clarity on everyday usage of language and for developing the art of parallel listening and writing.

CO2:Toconstructvocabularyandtogainunderstanding onthetensecomponent,apivotalconstituentfor language structuring and vocabulary building.

CO3:Toidentifywitheconomicalwordconstructions,payingspecificattentioninconstructingsoundwriting skills.

CO4:Tointerpretfunctionalgrammar,thebasicpartinvolvedinsentenceconstructingtoimprovelinguistic skills.

CO5:Todevelopcommunicationskillstoprovideaplatformforlanguageefficiencyforeffectivelanguage delivery.

VALUEEDUCATION&PERSONALITYDEVELOPMENT

CO1:StudentswillbeabletodifferentiateAcceptednormsandCountervaluesandbeabletoidentifythe various Dimensions of Human Development.

CO2:Studentswillbeable todemonstrateLoveandExperienceofGodandidentifytheBasicIssuesofLifeand Happiness as a life goal.

CO3:TheywillableTounderstandtheimportanceofConcernforothersandcritiquethevariousproblemsthat deter the growth of the society.

CO4:Thestudentswillbeabletorecognizethetraitsofagoodpersonalityandpracticeself-exploration.

CO5:StudentswillbeabletointerpretthePurposeofLifeandGoalSettinganddemonstrateSelf-management.

INTRODUCTIONTOWORKSHEETS

CO1:ExplaintheconceptsofMS-Excel

CO2:Analyzevariousfunctionsandillustratedatain Excel

CO3:DemonstratetheworkingofVisualBasic

CO4:Developprogrammingconceptsusing VB

CO5:Subdividelargerprogramsintosmalleronesusing subroutines

OPERATINGSYSTEMS

CO1:ExplainProcessmanagementandCPUscheduling.

CO2:Understanddeadlockandpagingconcept.

CO3:DemonstrateWindows7Installation.

CO4:AnalyzeaboutWindowsserver2012.

CO5:DemonstrateWindowsServer2012-StorageandBackupManagement.

COMPUTERFUNDAMENTALS

CO1:UnderstandvariousI/Odevicesandfunctionalityofcomputer

CO2:Understandtypesofmemoryandsoftware

CO3:Solvearithmeticoperationsusingdifferenttypesofnumbersystems

CO4:Distinguishdifferenttypesofnetworks,networkingdevicesandtopologies.

CO5:ExplainvariousIPaddressingmechanisms

PROBLEMSOLVINGANDPROGRAMMINGIN‘C’

CO1:ExplainthebasicintroductionofCprogramminglanguages.

CO2:Categorizedifferentdatatypes,operatorsanddatainput/outputfunctionsin‗C ‘.

CO3:Developprogramsusing‗C‘controlstructures,arraysandstringconcept.

CO4:Analyselargerproblemsintosmalleronesusing‗C‘functions.

CO5:Createprogramsusingtheconceptofstructures,unionandfilehandlingin ‗C‘.

GENERALENGLISH–II

CO1:Toidentifyasoundunderstandingontheformationofwordsandtodemonstratethefunctional grammatical component in the sentence.

CO2:Toparaphraseideasand thoughtsinacoherent,neatandorganizedmannerinordertoutilize thewriting skills for sound writing propagandas.

CO3:TocreateanunderstandingonIndianLiterature,alongsidetodevelopandchiseltheircommunication skills.

CO4:Torecognizethemoralelementwhichunderliesintheshortstory;anexposuretoinformallanguage.

CO5:Todeveloplisteningandspeakingskillsthrougheffectivesentenceconstructionsandefficientdelivery.

INDIANHERITAGE&CULTURE

CO1:Thestudentcanunderstandbetteraboutheoriginofancient Indianculture andthecontributionsof great rulers from both north and south India for Indian culture in ancient days

CO2:StudentswillanalysehowPersianculture enteredinto Indiaandhowit influencedtheFine ArtsofIndian society like Classical Music, Dance and Architecture.

CO3:Student canable toassesshowtheIndianorthodoxsocietyturnintomodernandwesternsocietyinthe 19th century. It also edifies the students with spiritual doctrines of various Religions.

CO4: Students will evaluate various challenges face by the youth and the evil affects of terrorism on society.

CO5: The topics in the unit create belongingness among the students by bringing awareness of the rights and dutiestomaketheworldabetterplaceanditthrowlight ongendersensitizationissuesofwomen,Childrenand LGBT.

WEBPROGRAMMING

CO1:Illustratebasichtmlscriptstodesignwebpages

CO2:Explainaboutcascadingstylesheets

CO3:Analysejavascriptprogrammingusingoperators,expressions,functions

CO4:Classifyeventhandlinginjavascript.

CO5:ExplaindisplayingXMLdocumentswithCSS

MATHEMATICSFORCOGNITIVESCIENCE

CO1:Constructsimplemathematicalproofsandpossesstheabilitytoverifythem.

CO2:Applybasiccountingtechniquestosolvecombinatorialproblems.

CO3:Solveproblemsusingrecurrencerelationsandrecursiontoanalysealgorithmsandprogramssuchas finding Fibonacci numbers and Tower of Hanoi problems.

CO4:Understandtofindtherank ofamatrixandtosolvesystemsoflinearequationsapplyingmatrix techniques.

CO5:Determineeigenvaluesandeigenvectors.

COMPUTERNETWORKS

CO1:Identifybasiccomputernetworktopologiesandprotocolsandexplain DataCommunicationSystem components

CO2:DescribeWirelessTransmission

CO3:UnderstandIPAddressingVersionandSwitchBasic

CO4:ConfigureRIP,EIGRPandOSPFprotocols

CO5:UnderstandoperationofWirelessnetworks,NATand ACL

C++andDATASTRUCTURES

CO1:Differentiatebetweenobject-orientedprogrammingandprocedure-orientedprogramming.**CO2**:Develop programs using object oriented programming features.

CO3:Organizethedatausingsortingandvariouslineardatastructuresanddeterminethetimecomplexity

CO4:Illustratenon-lineardatastructuresliketrees,graph

CO5:Chooseappropriatedatastructurestorepresentdataitemsinrealworldproblems

ENVIRONMENTALSTUDIES&GENDERSENSITIZATION

CO1:UnderstandtheimportanceofEnvironmentaleducation,conservationofnaturalresources&understand the importance of ecosystems and biodiversity

CO2:Understandthepollutionproblemsandapplytheenvironmentalscienceknowledgeonsolidwaste management, disaster management

CO3:Applytheenvironmentalscienceknowledgetoimprovetheresourcesand Evaluateandunderstandthe sustainable environmental conditions and control methods

CO4:Identifytheinteractionsandintersectionsofidentities(e.g.,gender,race,ethnicity,class,sexuality,andso on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems

CO5:Understandthegenderproblemsandwaysofaddressingthem,including interactionsacrosslocalto global scales in communities and overcome inequalities with legislations.

DISCRETEMATHEMATICS

CO1:DevelopunderstandingofLogicSetsandFunctions

CO2:Evaluateandapplythefundamentalconceptsingraphtheory

CO3:Developanunderstandingofhowgraphandtreeconceptsareusedtosolveproblemsarisinginthe computer science.

CO4:ExpresstheconceptsandresultsofNumberTheory.

CO5:Identifymethodsandtechniquesusedinnumbertheory.

INFRASTRUCTUREMANAGEMENT

CO1:DemonstrateInstallationandManagingWindows10Systems

CO2:AnalyzeManaingSystemsusingSystemCenter 2012

CO3:DemonstrateDeploymentandManagementofSystemCenter2012

CO4:UnderstandManagingandMonitoringInfrastructureusingSystemCenter2012

CO5:DemonstrateReportingofInfrastructureusingSystemCenter2012

VIRTUALIZATIONANDCLOUD

CO1:UnderstandDistributedSystemsandits Application.

CO2:AnalyzeCloudService ModelsandDeploymentModels

CO3:DemonstrateVirtualNetworksConfiguringandManagingVirtualStorage

CO4:UnderstandvSphereUpdate ManagerandHost Maintenance

CO5:DemonstrateRoleofdatacenterincloud computing

PYTHONPROGRAMMING

CO1:ExplainthebasicsofPythonProgramming constructs.

CO2:Subdivideslargerproblemsintosmalleronesusingfunctions

CO3:Applyvariousdatastructuresforproblem solving

CO4:Applyobject-orientedprogrammingfeaturesforsolvingagiven problem

CO5:Selectanappropriateexceptionhandlingdependingonapplicationanddesignfileoperations using Python standard library

PROBABILITY&STATISTICS

CO1: Employee the principles of linear regression and correlation, including least square method, predicting a particularvalueofYforagivenvalueofXandsignificanceofthe correlationcoefficient.**CO2**:Use discreteand continuous probability distributions, including requirements, mean and variance, and making decisions.

CO3:Abletoperformandanalyzehypothesestestsofmeans,proportionsandvariancesusingbothone-and two-sample data sets.

CO4:AbletoapplytheappropriateChi-Squaredtestforindependenceandgoodnessoffit.candifferentiate between the test statistics to be used for dependent and independent samples

CO5:Understandtheconceptsofqualitycontrol,chanceandassignablecausesofvariation,controlchartsfor variables.

OBJECTORIENTEDSYSTEMSDEVELOPMENT

CO1:ExplainbasicsofOOSDconcepts

CO2:CategorizeObjectorientedmethodologiesandUMLdiagrams.

CO3:Chooseclassificationtheoryandperformingcasestudies.

CO4:DesignmodelsbasedonObjectorientedconcept.

CO5:Identifysoftwarequality,systemusability,measuringandsatisfaction.

ARTIFICIALINTELLIGENCE

CO1:ApplybasicprinciplesofAIinsolutionsthatrequireproblemsolving,inference,perception,knowledge representation, and learning.

CO2:Understandpredicatelogicandtransformthereallifeinformationindifferentrepresentation.**CO3**: Understand formal methods of knowledge representation

CO4:DemonstrateKnowledgerepresentationtechniques.

CO5:Analyzetheunderlyingmathematicalrelationshipsandbuildexpertsystem.

DATABASEMANAGEMENTSYSTEMS

CO1:RepresentlogicaldatabaseusingEntityRelationshipandEnhancedERmodel.

CO2:Formulatedatabaseusingrelationalalgebraandorganizerelationusingnormalization.

CO3:DesignSQLqueriesandimplementsPL/SQL.

CO4:Classifythestorageandfilestructure,storageaccess,indexingandhashingtechniquesofthedatabase.

CO5:ExplaintheconceptofTransactions,recoverysystemandconcurrencycontrol.

PROCESSMANAGEMENT

CO1:Explainbasicsofsoftwareengineeringprocessmodels

CO2:Understandagilemethodologiesandscrumroles.

CO3:DemonstrateAgileandDevops.

CO4:ExplainLeanUXandAgileanti-patterns.

CO5:Classifydesignthinkingandleanthinking

JAVAPROGRAMMING

CO1:Understandfundamentalsofobjectorientedconcept,classes,objectsandmethods

CO2:Applyinheritance,packagesandexceptionalhandlingtechniques

CO3:DemonstrateThreadsandappletprogramming.

CO4: Expresseventhandling and swing components.

CO5: Design interactive programs using swing.

B.COM-BUSINESSPROCESSMANAGEMENT
FIRST YEAR- SEMESTER-I

FinancialAccounting-I
CO1: Describestheneedandimportance of accounting.
CO2: Explainsaboutsubdivisionofjournal
CO3: Comparesthecashbookand passbookbalancestoreconcilethe difference.
CO4: Analyses thefinancialpositionofanorganization
CO5: Identifiesthemistakesinbooksofaccountsandhelpsincorrectingthem.

PrinciplesofManagement
CO1: Toidentifyand interpretthevarious principlesandimportanceof management
CO2: Toexplainanddemonstrate theusesofplanningandorganizing
CO3: To classify and combine the various techniques of control and coordination.
CO4: Topointoutanddeveloptheessenceofmotivationanddirectiontothestudents **CO5:**
To interrelate and understand the essence of leadership and the importance of communication

FundamentalsofBusinessStatistics
CO1: Organize,manageandpresentdata.Canrepresentthestatisticaldataindiagrammatic and graphical form.
CO2: Calculatemeasuresofcentral tendency.

CO3: Analyse thedatausingmeasuresof dispersion.
CO4: Evaluatethenaturefor thestatisticaldatausingskewnessandmoments.
CO5: Determinetherelationbetweenanytwofactorsusingtheconceptsofcorrelationand regression analysis.

BusinessEconomics
CO1. Understand thebasictermsand conceptsusedintheBusinesseconomics.
CO2. Appraisethebehaviorofconsumersthroughthedemandandindifferenceanalysis**CO3**.Interpret the behavior of producer through supply, production and other related concepts
CO4.Differentiatethemarketformsandtheprice and outputdeterminationunder eachtypeof market.
CO5.Infertheimpactof thedifferentphaseofbusinesscycle andimpactofdeficitbalanceof payment.

FIRSTYEAR-SEMESTER-II

FinancialAccounting–II
CO1: IntroducesToThebasicconceptsofpartnershipandexplainstheadmissionofa partner.
CO2: Demonstrates theaccountingtreatmentrelatingtoretirementand deathofa partner.
CO3: Identifiestherulesapplicableforwindingupofpartnershipandinsolvencyofa partner.
CO4: Showsthemethodoffindingoutprofitsandfinancialpositionbyusingincomplete records.
CO5: Illustratesmethodofpreparingbooksunderhirepurchaseandinstalmentpurchase system

ManagerialEconomics

CO1. UnderstandthebasictermsandconceptsusedintheManagerialeconomics.
CO2. Interpretthebehavior ofproducer through costandrevenueconceptsindifferent time perspective.
CO3. DifferentiatethevariousPricingstrategies andthevarious degreesofPrice discrimination.
CO4.EvaluatethevariousCapitalBudgetingdecisionandthe methods.
CO5. Infer theimpactofthemacroeconomicfactorsonthebusinessconcerns

FundamentalsofBusinessMathematicsC
O1: To solve linear equations.
CO2: Togetsolutionsof reallifeproblemsbyusinglogarithmsandsettheory.
CO3: Tosolvetheproblemsinbusinesslinelikebanking sector.
CO4: Togetmaximumprofitandminimumlossincompanyproductivity.
CO5: Tomeasureareas&volumes

FundamentalsofInformationTechnology

CO1. Understandbasiccomputerterminologyandnumbersystems**. CO 2.**
Explain about operating systems, and its types

CO3. IdentifydifferentapplicationsofInformation technology.
CO4. Classifyphases ofSoftwareDevelopment Life Cycle
CO5.Categorizemodernmeans ofcommunications,typesofnetworksand topologies

SECONDYEAR-SEMESTER-III

DirectTaxes
CO1: Tounderstandthebasicdefinitionsofincometax,agriculturalincome,residential status and exempted incomes.
CO2: Toshowthecomputationofincomefromtheheadsalariesandhousepropertyasperit ACT.
CO3: Toidentifytheincomefrombusiness,professionandcapitalgains.
CO4: Tocomputetotalincomeof individualsand HUF.
CO5: ToassessthetaxliabilityofindividualsandHUFasperit act.

BusinessLaw
CO1:Demonstrate an understandingofthelegalenvironment ofthe business.
CO2:Explainslegalityofobjectandconsideration,dischargeofacontractandremedies available.
CO3:Identifytherecognitionoftransactionsinvolvingthesalesof goodsact.
CO4: Dramatizetheapplicationofconsumerprotectionact.
CO5:Torecognizeintellectual propertyrightsandintroductiontoitact2000andrightto information act.

AdvancedAccounting
CO1. Statesvariousmethodsforpreparing branchaccounts.
CO2. Describestheallocationand interdepartmentaltransferof expenses.
CO3.Analysesthefinancialpositionofnon-tradingconcerns.
CO4.Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar,premium and forfeiture.
CO5.Explainsaboutsourcesoffundsthroughissueofdebenturesandvariousmethodsof redemption.

BankingTheory

CO1. ToUnderstandtheGeneralOverview ofBankingandRetailBanking
CO 2. To Analyze about the Cards overview and types
CO3. ExplainabouttheConsumerLoansandMortgages
CO4. InterpretCashManagementandPaymentServices
CO5 EvaluatetheTradeFinance,Collections,payments,Guarantees&settlementsandvalueaddedservices

RetailEnvironmentAndMarketResearch

CO1: Tounderstandandinterpret thebasicmeaningofMarketing Research,and ConsumerBehaviour

CO2: Toclassify thedifferentsegmentationand analyze theoverviewof retailing.
CO3: Tocriticallyevaluatethe applicationofMarketing MixandConsumer Research
CO4: ToexplainandDifferentiateProductManagement, Brandmanagement&media management
CO5: Tocritically evaluatetheapplicationofConsumerResearch, RetailResearch&Media Research

SECONDYEAR-SEMESTER-IV

CorporateAccounting
CO1: To understand the various types of capital structures of the company and their representationinthebalancesheet,preparationoffinancialstatementswithprofits before incorporation.
CO2: Explainsthevaluationof sharesandgoodwill.
CO3: Analysesamalgamationinthenatureofmergerandpurchaseandaccountingtreatment for internal reconstruction.
CO4: Demonstratestheaccountingsystemsofabankingcompanyunder theguidance ofrbi.
CO5: HelpstoprepareinsuranceaccountsasperIRDAI guidelines.

CompanyLaw
CO1:Todevelopbasicknowledge ofprovisionsofcompaniesact2013.
CO2:Todescribethecapitalstructureofcompanythroughissuesofsharesandalterationof share capital.
CO3:Explaintheborrowingpowersofacompanyandconsequencesofultravires borrowing.
CO4:Statevariousprovisionsofthecompaniesactrelatingtocompanymanagementand meetings.
CO5:Toidentifyvariousmodesofwindingupandlegalprovisionsapplicable.
IndirectTaxes
CO1: Todescribebasic schemeof GST,GSTcouncilpower andfunctions.
CO2: ToexplainvariousGSTactsandalsovariousdefinitions
CO3: Toidentifytheregistrationprocedure,levyingofGSTandexemptions
CO4: To analyse different types of assessments and returns under GST
CO5: To appraise the exim procedure as per customs legislations in India.

PrinciplesofInsurance

CO1: ToExplainOverview ofInsurance andtypes
CO2: DemonstrateofLifeInsurance&Annuity
CO3: Evaluateandunderstand theProperty&CasualtyInsurance
CO4: ToExplainabutHealthcare Insurance
CO5: Tocritically evaluatethe applicationoftheRetirementServices

CostingAccounting

CO1: Tounderstandimportanceofcostaccountinginorganization.
CO2: Todescribetheprinciplesofmanaginginventoriesofmaterialsandtheproceduresfor accounting inventory.
CO3: Todescribe the principlesandpractice ofcostinglabourtoa business.
CO4: Todescribe theprinciplesandprocessofoverheadcostanalysis.
CO5: Toapplytheoperationof processcostingmethods.

CapitalMarkets
CO1. ToUnderstand CapitalMarketsand Typesof Securities
CO2. Toexplainaboutthe FinancialMarkets
CO3. ToDescribesInvestmentBanking
CO4. ToExplainFundsandkindsoffunds
CO5. Tounderstand PrivateEquity,CreditRiskandMarketRiskManagement

B.Sc.(ComputerScienceandArtificialIntelligence)

GENERALENGLISH-I
CO1:Todistinguishbetweenwordswhichareeitherspeltorpronouncedalike,yetrenderdistinctmeanings; imparting a sound clarity on everyday usage of language and for developing the art of parallel listening and writing.
CO2:Toconstructvocabularyandtogainunderstandingonthetensecomponent,apivotalconstituentfor language structuring and vocabulary building.
CO3:Toidentifywitheconomicalwordconstructions,payingspecificattentioninconstructingsoundwriting skills.
CO4:Tointerpretfunctionalgrammar,thebasicpartinvolvedinsentenceconstructingtoimprovelinguistic skills.
CO5:Todevelopcommunicationskillstoprovideaplatformforlanguageefficiencyforeffectivelanguage delivery

VALUEEDUCATION&PERSONALITYDEVELOPMENT

CO1:Studentswillbeable todifferentiateAcceptednormsandCountervaluesandbe abletoidentifythe various Dimensions of Human Development.

CO2:Studentswillbeable todemonstrateLoveandExperienceofGodandidentifytheBasicIssuesofLifeand Happiness as a life goal.

CO3:Theywillabletounderstandtheimportanceof Concernforothersandcritiquethevariousproblemsthat deter the growth of the society.

CO4:Thestudentswillbeabletorecognizethetraitsofagoodpersonalityandpractice Self-exploration.

CO5:StudentswillbeabletointerpretthePurposeofLifeandGoalSettinganddemonstrateSelf-management

COMPUTERFUNDAMENTALS

CO1:UnderstandvariousI/Odevicesandfunctionalityofcomputer CO2:

Understand types of memory and software

CO3:Solvearithmeticoperationsusingdifferenttypesofnumbersystems

CO4:Distinguishdifferenttypesofnetworks,networkingdevicesandtopologies. CO5:

Explain various IP addressing mechanisms

FUNDAMENTALSOFIoTANDROBOTICS

CO1:StudentswillbeUnderstandfundamentalsofIoT.

CO2:Studentswillbeable toclassifyandfamiliarizedwithbroadrange oftopicsinroboticswithemphasison basics of manipulators, coordinate transformation and kinematics.

CO3:Studentswillbeableunderstandtheconceptsofactuatorsandtheirimplementation. CO4:

Students will be able to learn types of sensors and they can apply in real-time.

CO5:StudentswillbeabletodemonstratewithtrajectoryplanningandRoboticcontroltechniques.

MATHEMATICSFORARTIFICIALINTELLIGENCE

CO1:Constructsimplemathematicalproofsandpossesstheabilitytoverifythem. CO2:

Apply basic counting techniques to solve combinatorial problems.

CO3:Solveproblemsusingrecurrencerelationsandrecursiontoanalyzealgorithmsandprogramssuchas finding Fibonacci numbers and Tower of Hanoi problems.

CO4:Understandtofindtherank ofamatrixandtosolvesystemsoflinearequationsapplyingmatrix techniques.

CO5:Determineeigenvaluesandeigenvectors

PROBLEMSOLVINGANDPROGRAMMINGIN‘C’
CO1:Explainthebasicintroductionofcomputerandprogramminglanguages
CO2:Categorizedifferentdatatypes,operatorsand datainput/outputfunctionsin‘C’. CO3:
Develop programs using ‘C’ control structures, arrays and string concept.
CO4:Analyselargerproblemsintosmalleronesusing‘C’functions.
CO5:Createprogramsusingtheconceptofstructures,unionandfilehandlingin ‘C’.

GENERALENGLISH –II

CO1:Toidentifyasoundunderstandingontheformationofwordsandtodemonstratethefunctional grammatical component in the sentence.
CO2:Toparaphraseideasandthoughtsinacoherent,neatandorganizedmannerinordertoutilize thewriting skills for sound writing propagandas.
CO3:Tocreateanunderstanding onIndian Literature,alongside todevelopand chiseltheircommunicationskills. CO4: To recognize the moral element which underlies in the short story; an exposure to informal language.
CO5:Todeveloplisteningandspeakingskillsthroughheffectivesentenceconstructionsandefficientdelivery.

INDIANHERITAGE&CULTURE

CO1:Thestudentcanunderstandbetteraboutheoriginofancient Indianculture andthecontributionsofgreat rulers from both north and south India for Indian culture in ancient days
CO2:StudentswillanalysehowPersianculture enteredintoIndia andhowitinfluencedtheFine ArtsofIndian society like Classical Music, Dance and Architecture.
CO3:Studentcanabletoassesshowthe Indianorthodoxsocietyturninto modernandwesternsocietyinthe 19th century .It also edifies the students with spiritual doctrines of various Religions.
CO4: Students will evaluate various challenges face by the youth and the evil affects of terrorism on society.
CO5: The topics in the unit create belongingness among the students by bringing awareness of the rights and dutiestomaketheworldabetterplaceanditthrowlight ongendersensitizationissuesofwomen,Childrenand LGBT

PROBABILITY&STATISTICS

CO1: Employee the principles of linear regression and correlation, including least square method, predicting a particularvalueofYforagivenvalueofXandsignificanceofthe correlationcoefficient.CO2:Usediscreteand continuous probability distributions, including requirements, mean and variance, and making decisions.
CO3:Able toperformandanalyzehypothesestestsofmeans,proportionsandvariancesusingbothone-and two-sample data sets..
CO4:AbletoapplytheappropriateChi-Squaredtestforindependenceandgoodnessoffit.candifferentiate between the test statistics to be used for dependent and independent samples
CO5:Understandthe conceptsofqualitycontrol,chanceandassignablecausesofvariation,controlchartsfor variables.

WEB TECHNOLOGIES

CO1:Illustratebasichtmlscriptstodesignwebpages
CO2: Explain about cascading style sheets
CO3:Analyzejavascriptprogrammingusingoperators,expressions,functions
CO4: Classify event handling in java script and introduction to xml
CO5:DevelopPHPprogramsanddatabaseconnectivitythroughmysql

OPERATINGSYSTEMS
CO1:Explainfunctions,typesandstructuresofoperatingsystem
CO2:Analyzevariousprocessmanagementconceptsincludingschedulingandsynchronization CO3:
Demonstrate process synchronization and dead locks
CO4:Solveissuesrelatedtofilesysteminterface
CO5:ChooseanappropriatePagereplacementalgorithm

C++andDATA STRUCTURES
CO1:Differentiatebetweenobject-orientedprogrammingandprocedure-orientedprogramming. CO2:
Develop programs using object oriented programming features.
CO3:Organizethedatausingsortingandvariouslineardatastructuresanddeterminethetimecomplexity CO4:
Illustrate non-linear data structures like trees, graph
CO5:Chooseappropriatedatastructurestorepresentdataitemsinrealworldproblems

ENVIRONMENTALSTUDIES&GENDERSENSITIZATION
CO1:UnderstandtheimportanceofEnvironmentaleducation,conservationofnaturalresources&Understand the importance of ecosystems and biodiversity
CO2:UnderstandthepollutionproblemsandApplytheenvironmentalscienceknowledgeonsolidwaste management, disaster management
CO3:Apply theenvironmentalscienceknowledge toImprovetheresourcesandEvaluateandunderstandthe sustainable environmental conditions and control methods
CO4:Identifytheinteractionsandintersectionsofidentities(e.g.,gender,race,ethnicity,class,sexuality,andso on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems
CO5:Understandthegenderproblemsandwaysofaddressingthem,including interactionsacrosslocaltoglobal scales in communities and overcome inequalities with legislations

LISPPROGRAMMING
CO1:UnderstandbasicsofLISPandinstallation
CO2:ImplementthestructureandcomponentsofaLISPprogram
CO3:InterprethowtowriteandimplementFunctionsinprogram CO4:
Create programs involving arrays and strings
CO5:Developprogramsrelatedtofileoperationsanderrorhandling.

DISTRIBUTEDSYSTEMS

CO1: To inculcate knowledge on Hardware requirement of distributed systems and communications.
CO2:Todemonstratetheconceptsofnaming,synchronizationissuesandConsistencyandreplication.
CO3:ToinculcateknowledgeonDistributedObjectbasedSystems,replicationconsistency,faulttolerance. CO4:
To illustrate the concepts of Distributed File Systems and Distributed Web-based Systems.
CO5:ToillustratetheconceptsofDistributedCoordination-BasedSystemsandMap-Reduce

DATABASEMANAGEMENTSYSTEMS

CO1:RepresentlogicaldatabaseusingEntityRelationshipandEnhancedERmodel.
CO2:Formulatedatabaseusingrelationalalgebraandorganizerelationusingnormalization. CO3:
Design SQL queries and implements PL/SQL.
CO4:Classifythestorageandfilestructure,storageaccess,indexingandhashing techniquesofthedatabase. CO5:
Explain the concept of Transactions, recovery system and concurrency control.

PYTHONPROGRAMMING

CO1:ExplainthebasicsofPythonProgrammingconstructs.
CO2:Subdivideslargerproblemsintosmalleronesusingfunctions CO3:
Apply various data structures problem-solving
CO4:ConstructPythonprogramsasasetofobjects.
CO5:Selectanappropriateexceptionhandlingdependingonapplicationand designfileoperationsand concurrent programming using Python standard library

ARTIFICIALINTELLIGENCE

CO1:ExplaintypesandAI applications.
CO2:ApplysearchalgorithmstosolveAIproblems
CO3:Inferfirstorderlogictorepresentknowledge
CO4: Explain various reasoning in AI
CO5:DevelopAIproblemsusingprolog

OPERATIONSRESEARCH

CO1: Identifythevarioustechniquesofoperationsresearchandtotranslateareal–world Problem, given in words, into a mathematical formulation.
CO2: Constructthesimplex tableandtoplantheoptimum results.
CO3: Use theprogramforoptimizingthecostinvolvedintransportationproblems
CO4: Develop andsolvetransformationmodelsandassignmentmodels
CO5: Designthe sequenceofjobsand tomake upthetotalprocesstime

COMPUTERNETWORKS

CO1:Understandandidentifybasiccomputernetworktopologiesandprotocolsandexplain Data Communication System components.
CO2:DescribethefunctionsofeachlayerinOSImodelanditsprotocols.

CO3:Classifydifferenterrordetectingtechniques.
CO4:Buildskillsofsub-nettingandroutingmechanisms.
CO5:Classifytheroutingprotocolsandanalyzehowtoassigntheipaddressesforthegivennetwork.

MACHINELEARNING
CO1:Illustratevariousmachinelearningalgorithms
CO2:Apply basicconceptsofmathematicsformachine learning
CO3:Examinevariousregressionmodelsforsupervisedlearning
CO4:Chooseappropriateclassifierforperformingclassification.
CO5: Design model for clustering

CLOUDCOMPUTING
CO1:Understanddistributedsystemsforcloudcomputing CO2:
Identify cloud servers, types and components
CO3:Analysecloudarchitecturalinformationinthepresentgenerationofmarket CO4:
Compare types of clients in the cloud and virtualization
CO5:Examinevirtualmachinesthemarketandusage

DATAMINING
CO1:Understandtheconceptsofdatamining
CO2: Identify the various sampling methods in data streams
CO3:Identifythevariousalgorithmsusedforminingdatasets CO4:
Compare the types of analysis techniques
CO5:Examinethediscriminateanalysis

DATAENGINEERINGTHROUGHPYTHON
CO1:Explaindatascienceconceptsand workingwithfilesandtextdata. CO2:
Apply regular expressions on strings
CO3:ExplaindatabaseoperationsusingMySQLandworkingwithNUMPY. CO4:
Select appropriate plot techniques for visualizing data
CO5:Formulategraphtheoryusingpythonmodules

B.Sc.(ComputerScienceandCyberSecurity)

GENERALENGLISH-I

CO1:Todistinguishbetweenwordswhichareeitherspeltorpronouncedalike,yetrenderdistinctmeanings; imparting a sound clarity on everyday usage of language, and for developingthe art of parallel listening and writing.
CO2:Toconstructvocabularyandtogainunderstanding onthetensecomponent,apivotalconstituentfor language structuring and vocabulary building.
CO3:Toidentifywitheconomicalwordconstructions,payingspecificattentioninconstructingsoundwriting skills.
CO4:Tointerpretfunctionalgrammar,thebasicpartinvolvedinsentenceconstructingtoimprovelinguisticskills. CO5: To develop communication skills to provide a platform for language efficiencyforeffective

VALUEEDUCATION&PERSONALITYDEVELOPMENT
CO1:DifferentiateacceptednormsandcountervaluesandtoidentifythevariousdimensionsofHumanDevelopme nt.
CO2: Demonstrate Love and Experience of God and identify the Basic Issues of LifeandHappiness as a life goal.
CO3:Understandthe importanceofConcernforothersandcritiquethevariousproblemsthatdeterthegrowth of the society.
CO4:Recognizethetraitsofagoodpersonalityandpractice Self-exploration.
CO5:InterpretthePurposeofLifeandGoalSettinganddemonstrateSelf-management.

COMPUTERFUNDAMENTALS
CO1:UnderstandvariousI/Odevicesandfunctionalityofcomputer
CO2:Solvearithmeticoperationsusingdifferenttypesofnumbersystems CO3:
Understand the concepts of Data Organisation
CO4:UnderstandtheconceptsofInternet
CO5:ExplaintheconceptsofProblemSolvingusingComputers

MATHEMATICALFOUNDATIONFORCYBER-SECURITY
CO1:Constructsimplemathematicalproofsandpossesstheabilitytoverifythem.
CO2:Apply basic counting techniques to solve combinatorial problems.
CO3:Solveproblemsusing recurrencerelationsandrecursiontoanalysealgorithmsandprogramssuchas finding fibonacci numbers andTowerof Hanoi problems.
CO4:Understandtofindtherankofamatrixandtosolvesystemsoflinearequationsapplyingmatrixtechniques.
CO5:DetermineEigenvaluesAndEigenvectorsofagivenmatrixandtoapplytheseconceptstoquadraticforms

ITHardwareandNetworking
CO1:IdentifyMotherboardanditscomponents.
CO2:Explain The working of Hardware devices
CO3: Understand about computer networks
CO4: Exploring different networking devices
CO5: Exploring Ubuntu Operating System

PROBLEMSOLVINGANDPROGRAMMINGTHROUGH‘C’
CO1: Explain Basic concepts of C programmingCO2:Developprogramsusing‘C’control structures. CO3: Organise data using arrays and strings
CO4:Subdivideslargerproblemsintosmalleronesusing‘C’functions.
CO5:Createprogramsusingtheconceptofstructures,unionandfilehandlingin‘C’

GENERALENGLISH-II
CO1.Toidentifyasoundunderstandingontheformationofwordsandtodemonstratethefunctional grammatical component in the sentence.
CO2.Toparaphraseideasandthoughtsinacoherent,neatandorganizedmannerinordertoutilize thewriting skills for sound writing propagandas.
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CO4.To recognize the moral element which underlies in the short story; an exposure to informal language.
CO5.Todeveloplisteningandspeakingskillsthrougheffectivesentenceconstructionsandefficientdelivery.

INDIANHERITAGEANDCULTURE
CO1:Identifybasiccomputernetworktopologiesandprotocolsandexplain Data CommunicationSystemcomponents
CO2: Classify different error detecting techniques.
CO3:Constructsubnettingandroutingmechanisms.
CO4:Sketchtheroutingprotocolsand analysehowtoassignthe IPaddressesforthe givennetwork CO5: Develop network design and implementation

ELEMENTARYNUMBERTHEORYANDLAPLACETRANSFORMS
CO1:SolvechallengingproblemsinNumberTheory.
CO2:Demonstrateknowledgeandunderstandingoftopicsincludingdivisibility,primenumbers, congruences,Diophantine equations.
CO3:Identifymethodsandtechniquesusedinnumbertheory.
CO4:Developadeeperconceptualunderstandingofthetheoreticalbasisofnumbertheoryandcryptography. CO5: Calculate the Laplace transform, Inverse Laplace Transform of standard functions.

PRINCIPLESOFINFORMATIONSECURITY
CO1:Explainconceptsofconfidentiality,availabilityandintegrity(CIA)incontextofInformationsecurity CO2: Identify the risk, assess and risk control strategies.
CO3: Demonstrate expertise in configuring host and network level technical security controls toincludehostfirewalls,useraccesscontrols,hostlogging,networkfiltering,intrusiondetectionandprevention CO4: Analyse systems, tools, methods, and techniques for securing digital information withinanorganisation CO5: Develop encryption and decryption techniques

C++andDATA STRUCTURES

CO1:Differentiatebetweenobject-orientedprogrammingandprocedure-orientedprogramming. CO2:
Develop programs using object oriented programming features.
CO3:Organisethedatausingsortingandvariouslineardatastructuresanddeterminethetimecomplexity CO4:
Illustrate non-linear data structures like trees, graph
CO5:Chooseappropriatedatastructurestorepresentdataitemsinrealworldproblems

ENVIRONMENTALSTUDIES&GENDERSENSITIZATION
CO1:UnderstandtheimportanceofEnvironmentaleducation,conservationofnaturalresources&Understand the importance of ecosystems and biodiversity
CO2:UnderstandthepollutionproblemsandApplytheenvironmentalscienceknowledgeonsolidwaste management, disaster management
CO3:Apply theenvironmentalscienceknowledge toImprovetheresourcesandEvaluateandunderstandthe sustainable environmental conditions and control methods
CO4:Identifytheinteractionsandintersectionsofidentities(e.g.,gender,race,ethnicity,class,sexuality,andso on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems
CO5:Understandthegenderproblemsandwaysofaddressingthem,including interactionsacrosslocaltoglobal scales in communities and overcome inequalities with legislations

PrinciplesOfInformationSecurity
CO1:Explainconceptsofconfidentiality,availabilityandintegrity(CIA)incontextofInformationsecurity CO2:
Identify the risk, assess and risk control strategies.
CO3:Demonstrateexpertiseinconfiguringhostandnetworkleveltechnicalsecuritycontrols toincludehostfirewalls
CO4:Analysesystems,tools,methods,andtechniquesforsecuringdigitalinformationwithinanorganisation CO5:
Develop encryption and decryption techniques.

EthicalHacking
CO1:Explainessentialterminologyandphasesofhacking CO2:
Identify different types of scanning methods
CO3:AnalysehowtoperformIP Spoofing
CO4:UnderstandSniffingandSocialEngineering
CO5: Understanding Session Hijacking

CryptographicAlgorithms

CO1:Identifyinformationsecuritygoals,classicalencryptiontechniquesandacquirefundamentalknowledgeon the concepts of finite fields and number theory.
CO2:ApplyPublicKeyCryptographicTechniqueforsecuringmessages CO3:
Use an appropriate message authentication code.
CO4:Comparetheperformanceofdifferentmessagedigestalgorithmsforverifyingthe integrityofvaryingmessage sizes
CO5:ComparedifferentIEEEstandardsandelectronicmailsecurity

ServerAdministration
CO1:DescribeInstallationofLinuxandUserAdministration
CO2: Explain the use of SUDo and Configuring VNC
CO3:Explainconfigurationhttpandmailserver
CO4: Explain configuration SAMBA and LDAP
CO5:ExplaintheconceptsofInfrastructureservices

PythonProgramming
CO1:ExplainthebasicsofPythonProgrammingconstructs.
CO2:Subdivideslargerproblemsintosmalleronesusingfunctions CO3:
Apply various data structures for problem solving
CO4:Applyobject-orientedprogrammingfeaturesforsolvingagivenproblem
CO5:Selectanappropriateexceptionhandlingdependingonapplicationand designfileoperationsusingPython standard library

DISCRETEMATHEMATICS
CO1:DevelopanunderstandingofLogicSetsandFunctions
CO2:Evaluateandapplythefundamentalconceptsingraphtheory
CO3:Developanunderstandingofhowgraphandtreeconceptsareusedtosolveproblemsarisingincomputerscience
CO4:Expresstheconceptsandresultsof EulerandHamiltoniangraphs.
CO5:Identifymethodsandtechniquesusedtorepresentflowthroughanetwork.

ComputerForensics
CO1:ToUnderstandComputerForensicsindetail.
CO2:IdentifythetypesofEvidenceandMethodsofcollectingevidence. CO3:
To Explain Computer Forensics analysis and validation
CO4:ToAnalyseCurrentComputerForensictools
CO5:ToUnderstandacquisitionproceduresforcellphonesandmobile devices

CyberEthicsandIPR
CO1:Learntheconceptualandtheoreticalperspectiveofcyberlaws Presentation CO2:
Understand the legalities through analysis of IT Act, 2000 PresentationCO3:
Understand the concepts of Trademark

CO4:UnderstandtherelationbetweenIPRlawsPresentation CO5:
Understand the importance of E-commerce

WebTechnologies
CO1:Illustratebasichtmlscriptstodesignwebpages
CO2: Explain about cascading style sheets
CO3:Analyzejavascriptprogrammingusingoperators,expressions,functions
CO4: Classify event handling in java script and introduction to xml
CO5:DevelopPHPprogramsanddatabaseconnectivitythroughmysql

NetworkSecurity
CO1:UnderstandBasicsofNetworkSecurity,ClassesofAttacks CO2:Explain
about Secure Network Life Cycle Management CO3:Demonstrate Cisco
Router Configuration.
CO4:LearnSecuringtheCiscoISOimageandACS
CO5:Explore about ACL and Firewall

PythonScripting
CO1:Usesocketmoduletodevelopnetworkapplications CO2:
Infer network traffic using scapy python module.
CO3:Analyseinformationexposedbyservers
CO4: Apply network scanning with Python
CO5:Usevulnerabilityscannerstoreportmainvulnerabilitiesfoundinservers

STEGANOGRAPHY
CO1: Outline basic concepts of information hiding.
CO2:Surveyofcurrenttechniquesofsteganography
CO3:Analysehowtodetectandextracthiddeninformation.
CO4:Learnwatermarkingtechniquesandthroughexamplesunderstandtheconcept. CO5:
Understand the Steganography with case studies.

SECUREE-COMMERCE
CO1:Understandtheframeworkandanatomyofecommerceapplicationsandanalyze
ecommerceconsumer,organizational applications
CO2:UnderstandWebSecurityframework
CO3: Infer Digital payments system
CO4:UnderstandtheimplementationofElectronicDataInterchange(EDI) CO5:
Analise Strategies, Techniques of E payments

CLOUDCOMPUTING
CO1:Explaindifferencesofsystemmodels. CO2:
Identify different types of clouds
CO3:Analyzevirtualizationanddatacentreworkingprocedure
CO4: Classify public cloud platforms
CO5:Chooseaparticulardatasecurityinthe cloud

INTERNETOFTHINGS
CO1: Identify the importance of IOT and its applications
CO2: Differentiate between IOT and M2M, SDN and NFV
CO3:UnderstandbuildingofIOTdevicesandRaspberryPI
CO4: Explain working of WAMP server and AWS
CO5:UnderstandapplicationsandanalyticsofIoT

GOLANGPROGRAMMING
CO1:IdentifytheimportanceandimplementationofGOLang.
CO2:DifferentiatebetweentypesofOperatorsandtypesFunctions. CO3:
Understand Arrays, Structure and its types
CO4:ExplainErrorHandlingtechniquesandFileoperations CO5:
Understand Hashing and Cryptography

MACHINELEARNINGFORCYBERSECURITY
CO1:Outlinebasicconceptsofmachinelearning
CO2: Discuss Machine learning concepts for ensemble modelling and URLs
CO3:ClassifyonemailandspamdetectionusingMachinelearningalgorithms CO4:
Predict Anomaly and malicious detection
CO5:Developmodelforimpersonationandfinancialfraud.

DATABASETECHNOLOGY
CO1: Represent logical database using Entity Relationship and Enhanced ER model.
CO2:Formulatedatabaseusingrelationalalgebraandorganizeusingnormalization. CO3:
Develop programs using PL/SQL and the need for Transactions
CO4: Explain the need for NOSQL and its
characteristics
CO5:ImplementdocumentdatabasessuchasMongoDB

DISASTERRECOVERYANDRISKMANAGEMENT
CO1: An organizational asset that has utility, and a value – which may be relative depending on the perspectivetaken,andthereforecanbeclassifiedtoreflectitsimportancetoanorganizationorindividual. CO2:
Clear understandability in the field of security threats, vulnerabilities, and consequences areessentialinmanaging cyber security

CO3:Cybersecuritylifecycleandstrategyforplanning arekeyfactorsinenterprisesecurityservices. CO4:
The security models and management concepts are taken as additional concepts in learningprocessofriskmanagement in cyber security.
CO5:Informationriskmanagementisatermreferringtotheprocessofdocumentingwhatinformation

CYBERTHREATINTELLIGENCE
CO1:StudyofdifferentCyberThreat
CO2:LearnthetechniquetoDevelopCyberThreatIntelligenceRequirements. CO3:
Collect Cyber Threat Information
CO4:AnalyseandDisseminateCyberThreatIntelligence
CO5:SelectrightCyberthreatintelligencepartnerforimprovedsecurity

BLOCKCHAINANDCRYPTOCURRENCY
CO-1:Understandthat howbitcoinworks,whenatransactioniscreatedandwhenit isconsideredpartofthe blockchain.
CO-2:Tointeractwithablockchainsystembysendingandreadingtransactions.
CO-3:Tolearnaboutdifferentkindsofforkingandexplaintheir Bitcoin'snetworkmechanismsformaintaining and upgrading
CO-4:Todescribedifferencesbetweenproof-of-workandproof-of-stakeconsensus. CO-
5: Design, build, and deploy smart contracts and distributed applications.

WEBAPPLICATIONTESTING
CO1: Identify Web application technologies
CO2: Experiment using Client-Side Controls
CO3:Explainauthenticationandauthorization
CO4: Implement SQL injection
CO5:DevelopCross-SiteScripting

B.Sc.FOODSCIENCE,NUTRITIONANDDIETITICS

GENERALENGLISH-I
CO1:Todistinguishbetweenwordswhichareeitherspeltorpronouncedalike,yetrenderdistinctmeanings; imparting a sound clarity on everyday usage of language, and for developingthe art of parallel listening and writing.
CO2:Toconstructvocabularyandtogainunderstanding onthetensecomponent,apivotalconstituentfor language structuring and vocabulary building.
CO3:Toidentifywitheconomicalwordconstructions,payingspecificattentioninconstructingsoundwriting skills.
CO4:Tointerpretfunctionalgrammar,thebasicpartinvolvedinsentenceconstructingtoimprovelinguisticskills. CO5:
To develop communication skills to provide a platform for language efficiencyforeffective

VALUEEDUCATION&PERSONALITYDEVELOPMENT
CO1:DifferentiateacceptednormsandcountervaluesandtoidentifythevariousdimensionsofHumanDevelopment.
CO2: Demonstrate Love and Experience of God and identify the Basic Issues of LifeandHappiness as a life goal.
CO3:Understandthe importanceofConcernforothersandcritiquethevariousproblemsthatdeterthegrowth of the society.
CO4:RecognizethetraitsofagoodpersonalityandpracticeSelf-exploration.
CO5:InterpretthePurposeofLifeandGoalSettinganddemonstrateSelf-management.

HUMANANATOMYANDPHYSIOLOGY
CO1:Thestudentswillbeabletodescribebasicaspectsofanatomyandphysiology.
CO2:Thestudentswillbe abletoclassifydifferentfunctionsofdigestiveandrespiratorysystemofhumanbody. CO3: Students will be able to identify different blood groups, endocrine glands.
CO4:StudentswillbeabletoappraisethefunctionsofnervousandMusculoskeletalsystem. CO5: Students will be able to describe the functions of reproductive and excretory system .

BASICFOODSCIENCE
CO1:Studentswillbeabletounderstandvariousmethodsoffoodprocessing. CO2: Students will be able to learn about sugars and sweeteners.
CO3:Studentswillbeabletoevaluatetherollofcerealsandfatsinfood.
CO4: Students will be able to differentiate various chemical reactions occurring in proteins and enzymes.
CO5: Students will be able to explain role of meat products in health.

FUNDAMENTALSOFNUTRITION
CO1:Studentswillunderstandnutrientinterrelationshipsandfunctionsoffood CO2: Students will learn concepts of RDA by ICMR
CO3:Studentswillevaluatemetabolismofenergy
CO4:StudentswillclassifyandunderstandknowledgeofMacro-nutrients
CO5:Studentswillclassifyandunderstandknowledge of andmicro-nutrients

NUTRITIONALBIOCHEMISTRY
CO1:Thestudentswillbeabletoidentifytheimportanceofnutrientutilization
CO2:Thestudentswillbeabletoexplainthecarbohydrateschemistryanditsmetabolism. CO4: The students will be able to explain lipid chemistry and its metabolism.
CO5:Thestudentswillbeabletoexplainproteinchemistryanditsmetabolism
CO5:Thestudentswillbe abletoidentifytheimportanceofbioenergeticsandbiologicaloxidation GENERAL

ENGLISH -II

CO1.Toidentifyasoundunderstandingontheformationofwordsandtodemonstratethefunctional grammatical component in the sentence.
CO2.Toparaphraseideasandthoughtsinacoherent,neatandorganizedmannerinordertoutilize thewriting skills for sound writing propagandas.
CO3.Tocreate anunderstandingonIndian Literature,alongside todevelopandchiseltheircommunication skills.
CO4.To recognize the moral element which underlies in the short story; an exposure to informal language.
CO5.Todeveloplisteningandspeakingskillsthrougheffectivesentenceconstructionsandefficientdelivery.

INDIANHERITAGE&CULTURE
CO1:Identifybasiccomputernetworktopologiesandprotocolsandexplain Data CommunicationSystemcomponents
CO2: Classify different error detecting techniques.
CO3:Constructsubnettingandroutingmechanisms.
CO4:Sketchtheroutingprotocolsand analysehowtoassignthe IPaddressesforthe givennetwork CO5: Develop network design and implementation

FOODMICROBIOLOGY
CO1:Thestudentswillbeabletoidentifydifferentmicroorganismsassociatedwithfood. CO2: The students will be able to appraise the microbial estimation in food.
CO3: The students will be able to classify microorganism associated with food and water.
CO4: The students will be able to compare different food preservation techniques used.
CO5:Thestudentswillbeabletoexplainfoodborneillnesscausedduetomicroorganisms.

FAMILYMEALMANAGEMENT
CO1:Studentswillbeabletodescribebasictermsandprinciplesofmeal planning.
CO2:Studentswillbeabletousenutritionalknowledgetoapplyduringpregnancyandlactationperiod. CO3: Students will be able to identify nutrition related problems in infants and peaceful children.
CO4:Studentswillbeabletoconstructknowledgeonnutritionprogramsheldbygovernment.
CO5:Studentswillbeable toidentifythe nutritionalrequirements,nutritionrelatedproblemsinadultsand geriatrics.

ENVIRONMENTALSTUDIES&GENDERSENSITIZATION

CO1:Studentswillbeable tounderstandtheimportanceofEnvironmentaleducation,conservationofnatural resources &Understand the importance of ecosystems and biodiversity
CO2:Studentswillbeabletounderstandthepollutionproblemsand Applytheenvironmentalscience knowledge on solid waste management, disaster management

CO3:Studentswillbeable toapply theenvironmentalscienceknowledge toImprovetheresourcesandEvaluate and understand the sustainable environmental conditions and control methods
CO4:Students willbe able toidentify the interactionsand intersectionsofidentities (e.g.,gender, race,ethnicity, class, sexuality, and so on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems
CO5:StudentswillbeabletoUnderstandthegenderproblemsandwaysofaddressingthem,including interactions across local to global scales in communities and overcome inequalities with legislations

PRINCIPLESOFFOODSCIENCE,NUTRITIONANDDIETETICS

CO1:Thestudentswillclassifyfoodinrelationtohealthasasourceofnutrition. CO2:
Students will identify various principles and methods of presentation.
CO3:Studentswillbeabletocreateknowledgeonenergyvalueoffoods.
CO4:Studentswillbeabletoidentifyvariousdeficiencydisordersduetoimbalanceofnutrition. CO5:
Students will be able to construct various diet plans.

FoodSafetyandToxicology
CO1:Thestudentswillbeabletounderstandthebasicprincipleoffoodsafety.
CO2:Thestudentswillbe abletoapply themknowledgeoffoodlawsforsafefoodproduction. CO3:
Students will be able to explain various toxicants associated with food.
CO4:Studentswillbeabletoidentifythechemicalstoxicantinfoodsatvarious level.
CO5:Studentswillbeable toappraise microbialtoxinassociatedwithfood,theiroccurrence,symptomsand preventive measures.

FOODSCIENCEANDPROCESSING
CO1:Studentswillbeabletounderstandtheprinciplesinvolvedinprocessingofvariousfoodgrains.
CO2:Studentswillbeable toevaluatevariousstepstoeliminate antinutritionalcomponentsinnutsandoil seeds.
CO3:Studentswillbeabletoidentifyvariousdairyprocessingmethod.
CO4:Studentswillbeable tocreate anunderstandingonchangesoccurringinfruitsandvegetablesduring maturation.
CO5:Studentswillbeabletoappraisetheroleofsugarinfoodpreparation.

CLINICALBIOCHEMISTRY
CO1: Students will be able to create knowledge on chemistry and metabolism of protein.
CO2:Studentswillbeabletoevaluatevariousgastricfunctiontestsandendocrinedisorders.
CO3:Studentswillbeable toapply theknowledgeofliverandkidneyfunctiontestsandinterprettheresults. CO4:
Students will be able to identify the various cardiac function tests.
CO5:Studentswillbeabletoappraisetheroleoffluids,electrolyteandacidbasebalance.

NUTRITIONALASSESSMENTANDSURVEILLANCE
CO1:StudentswillbeabletoConstructknowledgeonnutritionalstatusassessmentmethod.
CO2:Students will be able to Use dietary intake parameter to assess nutritional status.
CO3:StudentswillbeabletoExplainbiochemicalparametertoassessnutritionalstatus. CO4:
Students will be able to Classify various nutritional surveillance system.
CO5:StudentswillbeabletoDescribetypeofnutritionalsurveillanceappropriatetodifferent situation.

NUTRITIONOFMACROANDMICRONUTRIENTS

CO1:Thestudentswillbeabletodifferentiatebetweenvariousfatsolublevitamins.
CO2:Thestudentswillbe abletounderstandtheimportanceanddeficienciesofwatersolublevitamins. CO3: The students will be able to appraise the role of macro and micro minerals.
CO4:Thestudentswillbeabletodemonstratetheroleoffunctionalfoods.
CO5:Thestudentswillbeabletounderstandnewerconceptsinclinicalandtherapeuticnutrition

PUBLICHEALTHNUTRITION
CO1:Thestudentswillbe abletounderstandtheConceptofPublicHealth&PublicNutrition. CO2: The students will be able to evaluate the key indicators used in public health.
CO3:Thestudentswillbeabletoassesstheproblemofundernutritionin India.
CO4:Thestudentswillbeabletoanalyzeindicatorsusedtodefinevariousdeficiencydisorders.
CO5:Thestudentswillbe abletounderstandmisleadingaboutnutritionalfactsonlabelandmisinformation about nutrition

FOODSCIENCEANDSENSORYEVALUATION
CO1:Thestudentswillbe abletounderstandthecompositionandcookingmethodsofegg,meat,fishand poultry.
CO2:Thestudentswillbeabletoclassifyspicesandcondiments.
CO3:Thestudentswillbeabletoappraisethenutritionalaspectsofbeverages. CO4: The students will be able to justify the need for fortification of foods.
CO5:Thestudentswillbeabletogainknowledgeonvariousfoodcommoditiesandsensoryevaluation

FOODPRESERVATION
CO1:Thestudentswillbeabletounderstandtheimportanceoffoodpreservation. CO2: The students will be able to prepare various food products.
CO3:Thestudentswillbeabletodistinguishbetweenlowandhightemperaturepreservation. CO4: The students will be able to identify the latest developments in food preservation.
CO5:Thestudentswillbeabletoappraisetheroleofpackaginginfoodpreservation

APPLIEDSTATISTICS
CO1:Thestudentswillbeabletointerpretthecorrelationbetweentwovariables.

CO2:Thestudentswillbe abletodevelopthe probabilitydensityfunctionoftransformationofrandomvariables.
CO3:Thestudentswillbe ableto analyzehypothesistests ofmeans,proportions and variancesusing bothone& two sample data sets.
CO4:Thestudentswillbe abletoexplaint-test,chi-squaretestforindependenceofattributesandgoodnessof fit.
CO5:Thestudentswillbeabletoclassifytheanalysisofvarianceofone-wayandtwo-wayclassification.

DIETTHERAPY
CO1:Thestudentswillbeabletodeigndifferentcommunicationmodels.
CO2:Thestudentswillbe abletoapply theknowledgeofMedicalNutritionTherapyforEnteralandParenteral Nutrition.
CO3:ThestudentswillbeabletounderstandtheUpperandLowerGIDisorders. CO4:
The students will be able to assess acute and chronic infectious disease.
CO5:Thestudentswillbeabletogainknowledgeon NutritionTherapyforDiabetesMellitus

QUANTITYFOODPRODUCTIONANDSERVICEPRACTICALS

1. PrepareassortedIndianfoodsinbulkquantities.
2. DemonstratethetechniquesofpreparationofdishesfromstatesofIndia.
3. Incorporatethespicesandcondimentsthatareuniquetoeachprovince.
4. PrepareIndianbreadsandtheirvariations.
5. Createdessertswithcorrecttextureandconsistency.

FOODPRODUCTDEVELOPMENTANDENTREPRENEURSHIP(DSE-1)
1. Toacquaintthestudentswiththeprinciplesofdevelopmentoffoodproducts.
2. Toenablethestudentstounderstanddifferentstepsinvolvedinproductdevelopment.
3. Tomakestudentsunderstandtheformulationsofnewproducts.
4. Toknowmarketsandvariousaspectsofmarketing.
5. Tounderstandentrepreneurshipandstrategiesofsmall-scalebusiness.

ADVANCEDNUTRITION(DSE-2)
1. Topreparestudentsforunderstandingthemanagementofpediatricnutrition.
2. Tomakestudentawareoflatesthappening inthefieldofgeriatrics.
3. Tomakestudentsunderstandtheroleofdietinmanagementoflipidemia.
4. Tounderstandthe roleofdietin cancers.
5. Tolearndietarymanagementinotherconditions.

NEWERPERSPECTIVESINPUBLICHEALTHNUTRITION(DSE-2)

1. TofamiliarizethestudentsaboutmonitoringNCD’sandtheirrisk factors.
2. TounderstandthepoliciesandnodalsectorsinIndia.
3. Tolearnvariousmillenniumdevelopmentgoals.
4. ToknowtheroleofnutritionincombatingNCD’S.
5. Tolearnthestrategiesandinterventionstoreduce NCD’s.

NUTRITIONFORHEALTHOFWOMENANDCHILDREN(DSE-3)

1. Tolearntheroleofwomeninnationaldevelopment
2. Toknowthepoliciesandprogramsforpromotingmaternalandchildnutrition
3. Tounderstandthehealthstatusofpregnant women
4. Toknowtheknowledgeofphysiologyandendocrinologyoflactation
5. Tolearntheetiologyandmanagementofmalnutrition

EMERGENCYNUTRITION(DSE-3)

1. ToknowtheneedformedicalnutritiontherapyforfeedingSAMchildren.
2. TounderstandtheWHOprotocolformanagementof SAM.
3. TomakethestudentslearntheexperiencesofSAMmanagementthroughNRC's
4. TounderstandtheuseofRTEfoodsinmanagementofSAM.
5. Toknowtheroleofnutritioninotheremergencies.

COMMUNITYNUTRITIONANDHEALTHEDUCATION(DSE-4)

1. Tomakestudentsunderstandtheresponsibilitiesofnutritionalcounsellor.
2. Tolearnthenationalnutritionalpolicies.
3. Toknowtheconceptsandcomponentsoffoodandnutritionsecurity.
4. Tounderstandvariouslevelsofhealthadministration.
5. Tolearnthemedicalmeasurestakenfor employees.

FOODPACKAGING(DSE-4)

1. Toimpartcomprehensiveoverviewofthescientificandtechnicalaspectsoffoodpackaging.
2. Toinstallknowledgeonpackagingmachinery,systems,testingandregulationsofpackaging.
3. Tomakestudentsunderstandthepackagingdesignandconsumerbehavior.
4. Toimpartknowledgepackagingevaluation.
5. Tolearnthelawsandregulationsoffoodpackaging.

FOOD AS MEDICINE (self-learning course)

1. TointroducetheconceptsofAyurveda.
2. Toimpartknowledgeonhistoryandevolutionofdietsandrawfoodism.
3. Tounderstandthestrategiesoffastinganddetoxification.
4. Tolearnvariouscomponentsofdietarytreatment.
5. Toknowthereviewofvariousspicesandherbs.

BAKINGSCIENCE(addoncourse)

1. Toknowthecommoningredientsusedinbaking
2. Tounderstandthevariousmethodsusedtoprepare breads.
3. Tolearntheprocedureandpackagingofbiscuits.
4. Tounderstandthecakemixingobjectivesandmethods
5. Tolearnvariousaspectsinpreparationofwafers,frozendoughproducts.

MasterofComputerApplications (MCA)

Program Outcomes

PO1:Engineeringknowledge:Applytheknowledgeofmathematics,computerscience,various programming languages, databases and operating system to develop a software system.
PO2:Problemanalysis:Identify,formulate,reviewresearchliterature,andanalyzecomplex engineering problems to reach substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO3:Design/developmentofsolutions:Designsolutionsforcomplexengineeringproblemsand System components or processes that meet the specified needs of public health and safety.
PO4:Continuouslearning:Recognizetheneedsandimprovestheabilitytoengagein independent and life-long learning as trends changes in technology.

ProgrammeSpecificOutcomes:

PSO1: To consolidate foundation of mathematics, computer science and problem solving methodologyforeffectiveimplementationintheareaofsoftwaredevelopment.To inculcate advance knowledge about various sub-domains of computer science and applications.
PSO2: Topreparegraduatestoachieve peer-recognition,asanindividualandinateam,through demonstration of good analytical, design and implementation skills.
PSO3: To improve the ability to test and analyze the qualities of various subsystems and to integratethemtogethertoevolvealargerandbettercomputingsystem,thatincludesthe concept of mathematics, computer engineering and related disciplines to meet the user objective .

ProbabilityandStatistics

CO1: Classifyingdataandchoosegraphical representation
CO2: Explanationofdescriptive measures
CO3: Evaluationofcorrelation,regression and testing.
CO4: Applicationofprobabilityanddistributions
CO5: Identificationofdataandapplying specificdistributions.

Discrete Mathematics

CO1: DefineStatements,connectives,howtoapplyconnectives,workingwithsets,andsubsets and represent them in Venn diagrams
CO2: Explainsaboutrelations,ordering,functions,latticesandBooleanalgebraillustratingwith examples.
CO3: Explainsaboutalgebraicstructuresandgroupsbyapplyingvarioustheoremsandsolving for an appropriate result.
CO4: Explainsaboutalgebraicstructuresandgroupsbyapplyingvarioustheoremsandsolving for an appropriate result.
CO5: Constructsgraphs,trees andplanar graphs.

ComputerProgrammingandProblemSolvingUsingC

CO1: Understandthebasicintroductionofprogramminglanguage,algorithms,flowchartsand Identify 'C' data types, operators and data input /output functions.
CO2: Understand 'C'control structures,arraysanditsapplications.
CO3: Explain'Functions, Recursionandstringconcept.
CO4: Demonstrate'C'Pointers,recursionand dynamicmemoryallocation.
CO5: Expresstheconceptofstructures,unionandfilehandlingin'C'.

ComputerArchitecture

CO1: Demonstrateknowledge ofregisterorganizationofabasic computer system
CO2: Explainmachine languageofabasiccomputer system.
CO3: Appraisein-depthunderstandingofcontrolunitorganizationandmicroprogrammed control.
CO4: Applyvariousalgorithmstoperformarithmeticoperationsandproposesuitablehardware for them
CO5: Analyzeandemphasizevariouscommunicationmediainthebasiccomputersystemusing design of various memory structures

OperationsResearch

CO1: Identifyingthe methodstosolveLPP.
CO2: ApplyingORtotransportation problems.
CO3: ApplyingORtoAssignment problemsand IPP.
CO4: CreatingthenetworkdiagramsforProject management problems.
CO5: Analyzing thegametheoryproblems.

C++andDataStructures

CO1: Differentiatebetweenobject-orientedprogrammingandprocedure-orientedprogramming.
CO2: Develop programs usingobjectoriented programming features.
CO3: Developprograms usingpolymorphism.
CO4: Understand thelinear datastructures likelinear lists,stacksandqueues.
CO5: Understand thenon-lineardatastructuresliketrees, graphs.

OperatingSystems

CO1: ExplainOSstructuresandprocess managementconceptsincludingscheduling.
CO2: Illustrate the concepts of memory management and file system
CO3: Analyzevariousprocesssynchronizationproblemsanddeadlocks
CO4: IdentifytheresultsofdiskschedulingalgorithmsandI/O systems
CO5: DescribevariousoperatingsystemslikeWindowsXP,LinuxpertainingwithProcess, File , I/O management

ComputerNetworks

CO1: DefinesDataCommunication,componentsofnetworks,explainsthetypeofTransmissionmedia and describes the functions of each layer in OSI and TCP/IP model.
CO2: Describesthe functionsofData linkLayer and explainsthevariousprotocols.
CO3: ClassifytheroutingprotocolsandanalyzehowtoassigntheIPaddressesforthe given

network.

CO4: DescribetheTransport layerheaderformatand services

CO5: Explainthefunctionsof PresentationlayerandApplicationlayer

ManagementInformationSystemsandM-Commerce

CO1: Understanduseofinformationtechnologyandbusinessprocessinengineeringandinformation technology

CO2: Interrelate applications of information technology

CO3: Compare various decision making systems

CO4: Coverbroadrangeofissuesfromb2c,b2bandc2c

CO5: Expose the awareness of m commerce applications

SoftwareEngineering

CO1: DefineSoftwareEngineeringandhowtoapplythesoftwareengineeringlifecycleby demonstrating competence inplanning, analysis, design, implementation and maintenance..

CO2: ExplainsaboutSoftwareRequirementandSpecifications(SRS)andclassifiesthevarious Software Architectures.

CO3: ExplainsaboutSoftwareRequirementandSpecifications(SRS)andclassifiesthevarious Software Architectures.

CO4: Analyzesthevariousprogrammingprinciplesandguidelinesand ComparestheTesting techniques

CO5: Analyzesthevariousprogrammingprinciplesandguidelines and ComparestheTesting techniques

DatabaseManagementSystems

CO1: Represent logicaldatabaseusingEntityRelationshipandEnhanced ERmodel.

CO2: Formulatedatabaseusingrelationalalgebra andorganizerelation usingnormalization

CO3: DesignSQLqueries andimplementsPL/SQL.

CO4: Classifythestorageandfilestructure,storageaccess,indexingandhashingtechniquesof the database.

CO5: ExplaintheconceptofTransactions, recoverysystem andconcurrencycontrol

Design and Analysis of Algorithms

CO1: DefineElementarydatastructures

CO2: Explainingdivideandconquer,greedymethodswithexamples

CO3: Explaining dynamic programing and traversals

CO4: Explaining back tacking and branch and bound

CO5: AnalysisofNP-HardandNP-Completeproblems

ObjectOrientedPrinciplesusingJava

CO1: ExplainthebenefitsofJAVA'scomparedtootherProgrammingLanguage.Thestudent will be able to identify classes, objects, Interfaces. The student will be able to **demonstrate**theconceptsofpolymorphismandinheritance

CO2: CreateJavaprogramstoimplementerrorhandlingtechniquesusingexceptionhandling and Multi-Threading concepts

CO3: Identify usageofcollection framework.

CO4: DistinguishdifferentByteStreams andCharacterStreams.
CO5: construct appletsandJDBCprograms

DistributedSystems

CO1: DefinesDistributedsystems,goals,processesandidentifiestheadvantagesandchallenges indesigningdistributedalgorithmsfordifferentprimitiveslikemutualexclusion,deadlock detection, agreement, etc.
CO2: ExplainsaboutName entitiesandillustratesthevarioussynchronizationalgorithms
CO3: Differentiatebetweendifferenttypesoffaultsandfaulthandlingtechniquesinorderto implement fault tolerant systems.
CO4: Compares thevariousDistributedObject Systemsalongwiththeirrelated Case studies.
CO5: ConstructsthealgorithmsrelatedtoDistributedSharedmemoryandDistributed Scheduling.

DataWarehousingandDataMining

CO1: Tounderstand theconceptsofdata mininganditsimportanceandFIMalgorithms.
CO2: Analyzedifferentclassificationandclustering methodsusingalgorithms
CO3: Explainthedata flowandtheconceptsofwarehousing
CO4: Expresshowtobuilddata martsandtolearnaboutdimensionalmodeling.
CO5: Identify conceptsofExtraction,Transformationand loading

NetworkSecurity

CO1: Identifytheneedforsecurity,classicalencryptiontechniquesandacquirefundamental knowledge on Block cipher operations.
CO2: Apply Public Key Cryptographic Technique for securing messages
CO3: UseanappropriatemessageauthenticationcodesandDigitalsignatures
CO4: Explain distribution of public keys and Kerberos
CO5: CompareSSL,TLS,electronicmailsecurityandIPsecurity

AdvancedJava

CO1: DescribedifferentAWTandSwingsClasses.StudentscandesignGUIbasedapplications.
CO2: DescribedifferentAWTandSwingsClasses.StudentscandesignGUIbasedapplications.
CO3: DescribedifferentAWTandSwingsClasses.StudentscandesignGUIbasedapplications. **CO4:** Design applications based on MVC architecture using EJB. Student can identify different EnterpriseJavaBeans
CO5: CompareServletandJSPfeatures andcan designPresentationlogic.

WebTechnologies

CO1: Definecsscollectionsandevents
CO2: Demonstrate XML and AJAX
CO3: Explain basics of PHP
CO4: Selectingthedatabaseconnections
CO5: ExplainAdvancedoopsconceptswithPHP.

SoftwareTesting

CO1: Expressimportanceoftestinginsoftwaredevelopmentprocess,glass-boxtesting,black- box testing, and how to report and analyze bugs

CO2: Designdifferent typesoftestcase

CO3: Organizehowtobuildtestingstrategy,establishingsoftwaretestingmethodologyand software testing techniques.

CO4: Identify thedefinitionofquality,metricsforsoftwarequalityandinspection techniques.

CO5: Explainsoftwareconfigurationmanagement,softwarereengineeringandsoftware restructuring techniques.

BigDataAnalytics

CO1:DescribedifferentAWTand SwingsClasses.Studentscandesign GUIbasedapplications.

CO2: Develop webbased applicationsusingservlets.

CO3: CompareServletandJSPfeaturesandcandesignPresentationlogic.

CO4: CompareServletandJSPfeaturesandcandesignPresentationlogic.

CO5: CompareServletandJSPfeatures andcan designPresentationlogic.

SemanticWebandSocialNetworks

CO1: Defines Distributed systems, goals, processes and identifies the advantages and challenges indesigningdistributedalgorithmsfordifferentprimitiveslikemutualexclusion,deadlock detection,agreement,etc.

CO2: ExplainsaboutName entitiesandillustratesthevarioussynchronizationalgorithms

CO3: Differentiatebetweendifferenttypesoffaultsandfaulthandlingtechniquesinorderto implement fault tolerant systems.

CO4: Compares thevariousDistributedObject Systemsalongwiththeirrelated Case studies.

CO5: ConstructsthealgorithmsrelatedtoDistributedSharedmemoryandDistributed Scheduling.

Python& RProgramming

CO1: Understand thebasic concepts ofPythonobjects andcontrolstructures.

CO2: ExplainPythonfunctions,modulus,packagesandexceptionsanddevelopprogramsusing object oriented programming

CO3: Demonstratefilehandlinganddatabase Programming. ApplyPythonforDataAnalytics.

CO4: UnderstandbasicconceptofRanddemonstrateprogrammingconceptsanddatastructures in R.

CO5: Chooseanappropriategraphicforanalysisandanalyzedatausing summarystatistics. Choosethetype ofregressionbased ondataset.

ObjectOrientedSystemDevelopment

CO1: Describingthebasic conceptsof modeling.

CO2: ExplanationofBasicandAdvancedBehavioralModeling

CO3: Explanationof ArchitecturalModelingandcreationofUML diagrams

CO4: ApplicationsofUMLUnifiedSoftwareDevelopment Process

CO5: ApplicationsofUMLCore workflows.

M.ScOrganicChemistry

ProgramSpecificOutcomes

PSO1: **Understands,identifyandinterrelate**withthebackgroundoforganicreaction mechanisms, complex Stereo chemical structures, molecular rearrangements, instrumental method of chemical analysis and separation techniques

PSO2: **Analyses**theimportanceofvariouselementsintheperiodictable,coordination chemistry and structure of molecules, properties of compounds, and structural determination of complexes using theories.

PSO3: **Gathersattention**aboutthe physicalaspects ofatomicstructure, dualbehaviour, reactionpathwayswithrespecttotime,variousenergytransformations,molecular assembly in Nano level, electrochemistry &**infer** their significance

PSO4: **Learns,constructsandanalyses**thepotentialusesofanalyticaltechniques, medicinal chemistry and green chemistry.

PSO5: **Organise**and carry out experiments in the area of organic analysis,estimation,separation,derivativeprocess,preparation,conductometric, potentiometric and solve spectral analysis

InorganicChemistry-I

CO1: **Understands**the conceptofbondinginmetalcomplexes

CO2: **Interrelates**3-Dstructuresofmoleculeswiththeirsymmetry elements

CO3: **Categorises**the mechanisms of inorganic complexes

CO4: **Analyses**thestabilityofthecomplexesthroughequilibria

CO5: **Identifies** the ligational aspects of diatomic molecules

OrganicChemistry-I

CO1: **Acquires**the3-D aspects oforganic molecules

CO2: **Understands**and **compares** theorganicreaction mechanisms

CO3: **Develops**thefundamentalsofreactive intermediates

CO4: **Appreciates**thevariousstepsinvolvedinthemolecular rearrangements

CO5: **Perceives**theconceptofconformationalanalysis

PhysicalChemistry-I

CO1: **Learns** the classical status of thermodynamics

CO2: **Recognises**thedynamicsofelectrodereactions

CO3: **Perceives** the postulates of quantum chemistry

CO4: **Analyses**the importanceofrates ofchemicalreactions

CO5: **Gainsthepotential**onconcepts ofphotochemicalreactions

AnalyticalTechniques&Spectroscopy-I

CO1: **Recognises**theimportanceofvariouschromatographictechniques

CO2: **Understands**themagneticproperties ofnuclei

CO3: **Analyses**theapproachofIRandRamanspectraforstructuralelucidation

CO4: **Identifies**theelectronictransitionsinorganic molecules

CO5: **Gains**knowledgeaboutelectronicspinspectroscopy

InorganicChemistry-II

CO1: **Perceivesunderstanding**aboutterms,term symbolsand microstates
CO2: **Enlights**the knowledge about higher pointgroups**CO3:**
Analysesthereactionpathwaysofcomplexformation
CO4: **Learn** the structural patterns of metal clusters
CO5: **Validate**theroleofbioinorganicchemistryineverydaylife

OrganicChemistry-II

CO1: **Develops**anunderstandingaboutorganicreactionmechanisms
CO2: **Appreciates** the fundamentals of pericyclic reactions
CO3: **Apply**thetheoriesofpericyclicstomolecularreactions
CO4: **Understands** the importance of photochemistry
CO5: **Gains**the**potential**oforganic reagents

PhysicalChemistry-II

CO1: **Appreciates**thefundamentalsofmolecular thermodynamics
CO2: **Recognises**thevariouselectrochemical reactions
CO3: **Applies**thewavemechanicsfordeterminingatomic structures
CO4: **Understands**theimportance ofquantitativemechanicsinelectronic filling
CO5: **Visualises**themacromolecularstrucutres

AnalyticalTechniques&Spectroscopy-II

CO1: **Summarises**the concepts ofhyphenated techniques **CO2:**
Distinguishandidentifyfirstandnon-firstNMRspectra
CO3: **Gain knowledge** about mass spectrometry
CO4: **Analyse**thechemical structureusingmassfragmentation
CO5: **Validates**thestructureofmolecularionsthroughPES

OrganicChemistry-III

CO1: **Perceives** the concept of conformational analysis
CO2: **Analyses** the cruciality ofstereochemical process
CO3: **Classify**andinterrelatestypesofasymmetricsynthesis
CO4: **Understands** and formulates retrosynthesis
CO5: **Learns**newtechniques andconceptsinorganic synthesis

OrganicChemistry-IV

CO1: **Appreciate** the importance of protecting groups**CO2:**
Gains the potential of organic reagents in synthesis
CO3: **Enlights**theknowledgeaboutnewsyntheticreactions
CO4: **Determines**the chemicalenvironmentof ^{13}Cinorganic molecules
CO5: **Analyses**the chemicalstructureusing2D NMRandORD

NaturalProducts

CO1: **Understands**theimportanceofnatural products

CO2: **Determines**thestructureofalkaloidsbychemicalmethods
CO3: **Analyses** the complex structure of steroids and hormones
CO4: **Acquires** the knowledge of prostaglandins
CO5: **Recognises**theBiosyntheticpathways

BioorganicChemistry
CO1: **Appreciate**theimportanceofcarbohydrates and proteins
CO2: **Visualises**therole ofnucleic acidsandlipids
CO3: **Categorises**enzymes andtheiraction
CO4: **Identifies**theenzyme modelsandtheir transformations
CO5: **Perceives** theconceptof coenzymes

HeterocyclicChemistry
CO1: **Understands**thebackground of heterocyclics
CO2: **Compares**thereactivityofaromaticandnonaromatic heterocyclics
CO3: **Differentiate**fiveandsixmembered heterocyclics
CO4: **Distinguish**heterocyclics withmorethantwo heteroatoms
CO5: **Recognises**thelargering andother heterocyclics

GreenChemistry
CO1: **Learns**thebasicsofgreenchemistry
CO2: **Understand**theuse ofultrasoundsand microwave inorganic synthesis
CO3: **Appreciates**theimportanceofsolidfreesynthesis
CO4: **Perceives**theconceptofphasetransfercatalysisandcrown ethers
CO5: **Gains**knowledgeaboutmulticomponent reactions

OrganicChemistry-V
CO1: **Gains**knowledge aboutprincipleofdrugdesignand discovery
CO2: **Appreciates** the role of SAR and QSAR studies
CO3: **Infers** about drugs acting on metabolic processes
CO4: **Identifies**drugsactingonionchannelsandreceptors
CO5: **Analyses**importanceofdrugsactingongeneticmaterial

AnalyticalMethods
CO1: **Perceives** theconcepts theGCandHPLC
CO2: **Validates**theroleofhyphenatedtechniques
CO3: **Understands** the importance of electro analytical methods
CO4: **Analyses** the chemical structure of Uv-visible spectroscopy
CO5: **Determines**thechemicalenvironmentof^{1}HNMRspectroscopy

Nano& Polymer Chemistry
CO1:
Gainsknowledgeaboutbasicsofnanochemistry**C**
O2: **Understands** the applications of nanomaterials
CO3: **Determines** the various uses of polymers
CO4: **Learns**thebasicsofgreenchemistry

CO5: **Validates**theadverseeffectsofchemicalsonenvironment

M.Sc.FoodTechnology

TechnologyofFoodProcessing& Preservation

CO1: **Distinguish**varioushightemperaturefoodpreservationtechniques
CO2: **Classify** various low temperature food preservation techniques
CO3: **Explain** the types and functions of Food Additives
CO4: **Distinguish**variouspressureactivatedmembrane technologies
CO5: **Differentiate**newtechniques offood Preservation

FoodProcessEngineering-1

CO1: **Explain**theBasicPrinciplesofMaterial Balances
CO2: **Explain**theBasicPrinciplesofEnergy Balances andHeat properties
CO3: **Analyse**theconceptofThermodynamics
CO4: **Judge**thechanges inthermodynamicproperties associated withworkandheat
CO5: **Distinguish**variousRheological&Colligativeproperties offood materials

TechnologyofAnimal BasedFoodProducts

CO1: **Design**thelayoutof poultryprocessingandits maintenance
CO2: **Identify**thevarioussourcesof red meatanditsprocessingprocedures
CO3: **Identify** the various sea foods and its preservation techniques
CO4: **Describe**thedairyprocessing&qualityevaluationtechniques
CO5: **Recognize** the different types of dairy products

AdvanceFoodChemistry

CO1: **Classify**physicochemicalproperties ofcarbohydratesand proteins
CO2: **Explain**theeffectof processingonlipids–understand
CO3: **Analyse**theminorfoodconstituentchangesduringstorage andprocessing
CO4: **Distinguish**differentfoodadditivesand theiruses
CO5: **Explain**thedigestion,absorptionandmetabolismofnutrientsinhumansystem

FoodMicrobiology

CO1: **Identify**variousclassificationsandbiochemicalchangesrelatedto microorganisms
CO2: **Judge**theContaminationandspoilage ofperishable foodcommodities
CO3: **Categorize**variousfood borneinfections andhygiene-sanitationcontrol practices
CO4: **Distinguish**qualitativeandquantitativeassayfordetectionandcharacterizationof microorganisms
CO5: **Generalize**microbialfermentationinFood Industry

Post-HarvestTechnologyofPlantationcrops

CO1: **Identify**variousclassificationsandbiochemicalchangesrelatedto microorganisms
CO2: **Judge**theContaminationandspoilage ofperishable foodcommodities
CO3: **Categorize**variousfood borneinfections andhygiene-sanitationcontrol practices
CO4: **Distinguish**qualitativeandquantitativeassayfordetectionandcharacterizationof

microorganisms

CO5: **Generalize**microbialfermentationinFood Industry

Technologyof Cereals

CO1: **Explain**thecriteriaofwheatflour qualityanddoughrheology
CO2: **Classify**thestructureandcompositionofcorngrain
CO3: **Categorize**thetypesofrice millingandfactorsaffectingriceyieldduringmilling
CO4: **Distinguish**between differentparboilingmethodsofrice
CO5: **Compare**differentconvenience foodsofrice

FoodProcessEngineering-Ii

CO1: **Explain**theconceptofFluidDynamics
CO2: **Analyse**theheat andMasstransferprocessduringdehydration
CO3: **Solve**steadystateheattransfer calculations
CO4: **Demonstrate**heat exchangerequipment'sand**explain**heat transferequations
CO5: **Use**Physical separationprocessandmaterialhandling equipment

InstrumentalMethodsofFood Analysis

CO1: **Explain**thecalibrationandstandardizationofdifferentinstruments
CO2: **Analyse**different sectroscopic and Refracto metric techniques**CO3:** **Distinguish** various microscopic techniques in food analysis
CO4: **Distinguish**variouschromatographictechniquesinfood analysis
CO5: **Generalize**variousSeparationtechniquesinfoodanalysis

Milling&BakingTechnology

CO1: **Explain**theprocessingofvariouscereals
CO2: **Explain**theprocessingofvariousPulses
CO3: **Generalize**production,processing andmanufacturingofvalue-added product
CO4: **Distinguish**various conceptsofBaking Technology
CO5: **Demonstrate**variousmethodsformanufacturingofbakery products

TechnologyofFoodFermentation

CO1: **Explain**varioustypesfermented foods
CO2: **Classify**typesof beverages
CO3: **Categorize**packaging, storageandqualityevaluationofvarious Fruit Beverages
CO4: **Distinguish**storageandqualitycharacteristicsofSyntheticbeverages
CO5: **Interrelate**theequipment'susedforbrewinganddistillationofFermented Beverages

TechnologyofSugarConfectionery andChocolate Processing

CO1: **Describe**thegeneraltechnicalaspectsofconfectionery anditsraw materials
CO2: **Identify**theManufacturingpracticesof flour
CO3: **Identify**theManufacturingpracticesofsugarconfectioneryproducts
CO4: **Identify** theManufacturingpracticesofFruitconfectioneryproducts
CO5: **Explain** the chocolate processing technology

ExtrusionTechnology

CO1: **Describe**theprocessingtechnologyofSingle screwextruder

CO2: **Distinguish**thetypes ofextrudersusedindifferentfoodprocessingunit
CO3: **Categorize** the processing methods into pre and post extrusion
CO4: **Identify**theManufacturingpracticesofBreakfastCerealsandTVP
CO5: **Explain** the Manufacturing of different extruded Snack food

AdvancesinFoodPackaging

CO1: **Identify**variouspackagingrequirementsandselectionofpackagingmaterialsonthe basis of food type
CO2: **Categorize**Activeandintelligentpackaging techniques
CO3: **Generalize**Packaging-flavourinteractionsandnovelapplicationsinactive packaging
CO4: **Identify**Green plasticsforfoodpackaging asModern packaging systems
CO5: **Analyse**Shelflifeofprocessedandpackagedfoods

FoodQualitySystemsandManagement

CO1: **Identify**variousqualityattributes-physical,chemical,nutritionaland microbial
CO2: **Explain**Computer-aidedsensory evaluationprocedures forfood& beverages
CO3: **Categorize**conceptsofQualityControl,QualityAssuranceandTotalQuality Management
CO4: **Categorize** various organizations dealing with inspection, traceability, authentication certifications and quality assurance
CO5: **Distinguish**GlobalFoodSafetyStandardsandExportimportpolicyand documentation

EnergyConservation& Auditing

CO1: **Identify**basicprinciples&fundamentalsofenergy conservation
CO2: **Explain**energyconservationinthermalutilities
CO3: **Apply**Energymanagement&auditing
CO4: **Interrelate**andmatchenergy usagetorequirement
CO5: **Generalize**energymonitoringandtargeting

Foodand Nutrition

CO1: **Explain**allconceptsofNutrition&Nutrients
CO2: **Identify**variousVitamins&Minerals infood
CO3: **Classify**theconceptsofFoodEnergy &Recommendeddailyallowances
CO4: **Generalize** the Nutritional Status as programs to combat malnutrition of deficiency disorders
CO5: **Distinguish**variousSupplementaryFoods&Novel Foods

TechnologyOfFoodPreservation&Processing

CO1: **Explain**allconceptsofHigh TemperatureProcessing
CO2: **Explain**allconceptsofLowTemperature Processing

CO3: **Classify**differentmembranetechnologiesrelatedtopressureactivatedmembrane processes
CO4: **Generalize**theconcept ofFoodAdditiveusage&Fermentationprocesses
CO5: **Distinguish**various techniquesinfoodprocessing&preservation

FoodLaws,Regulations& Standards

CO1: **Explain**allconceptsoffoodsafety andstandards andfood safetystrategies
CO2: **Apply**conceptsrelatedtopreventionandcontrolofmicrobiologicalandchemical hazards.
CO3: **Classify**differentIndianFoodRegulatory Regimes
CO4: **Judgevarious**InternationalFoodStandards
CO5: **Distinguish**variousVoluntaryNationalFood StandardsandNutritional Labelling

FoodToxicologyand Allergens

CO1: **Explain**allconceptofAllergensandmicrobiological,nutritionalandenvironmental Hazards
CO2: **Classify**differentFoodallergyandsensitivityrelatedtofood
CO3: **Judge**variousnaturalfoodtoxicants&biologicalfactorsthatinfluencetoxicity **CO4:** **Distinguish** various Quantitative and qualitative analysis of toxicants in foods
CO5: **Classify** various toxicants formed during food processing & storage

FoodSupply&ColdChainManagement

CO1: **Illustrate**theimportance ofcoldchaininfoodprocessingindustry
CO2: **Express**functionsincoldstorages-retailsupermarketcoldchain&displaysystems

CO3: **Generalize**varioustemperaturerecordingdevicesusedduringtransportfordocumentation and traceability
CO4: **Explain**Supplychaininventorymanagement
CO5: **Classify**Internettechnologiesandelectronic commerce

MBA

Program Outcomes

PO1:ManagerialSkills:Applyknowledgeofmanagementtheoriesandpracticestosolvebusiness problems.

PO2:**DecisionmakingSkills**:FosterAnalyticalandcriticalthinkingabilitiesfordata-baseddecision making.
PO3:**Ethics**:AbilitytodevelopValue based Leadershipability.
PO4:**CommunicationSkills**:Abilitytounderstand,analyzeandcommunicateglobal,economic,legal, and ethical aspects of business
PO5:**LeadershipSkills**:Abilitytoleadthemselvesandothersintheachievementoforganizational goals, contributing effectively to a team environment.
PO6:**EntrepreneurialSkills**:Abilitytodemonstratetheskillsandappraiseaffairsrelatedto entrepreneurship and develop as entrepreneurs.
PO7: **Strategic analysis**: To conduct strategic analysis using theoretical and practical applications.PO8:**CogentSkills**:Tomanageintraandinterorganizationalnegotiationseffectivelyinacrosscultural business environment.

ProgramSpecificOutcomes

PSO1:ProfessionalSkills:Abletoutilizetheknowledgeofmanagement practices in innovative, dynamic and challenging environment in the organizations.
PSO2:Creativity:Createvaluethroughidentifyingcustomerneedsand implementing integrated production and distribution of goods, services
PSO3:Problem-SolvingSkills:Candevelopcapacitytoadaptandinnovativeto solve problems, to cope with unforeseen events and to manage in unpredictableenvironments.
PSO4:SuccessfulCareerandEntrepreneurship: Anunderstandingofsocial awareness and environmental wisdom along with ethical responsibility to haveasuccessfulcareerandtosustainpassionandzealforrealworld applications using optimal resources as an Entrepreneur.

CourseOutcomes

CommunicativeCompetence
CO1:Applyeffectivecommunicationand listeningstrategies invariousformalscenarios.
CO2:Classifydifferent typesof communication.
CO3:Expresslanguage correctlytocommunicate appropriately.
CO4:Definedifferentmeansof communication.
CO5:Statedifferent management communication.

ManagementandOrganization Behavior
CO1: Understand theconceptand process ofmanagement andorganizationbehaviour.
CO2:Examinethehistoricalrootsofcontemporary managementpractices.
CO3:Able tounderstandconcept,natureof perception.
CO4:Analysethetraditionaland contemporaryorganizationaldesignsand itsstructures.
CO5:Know thevarioustheoriesofmotivationandleadership.

InformationTechnologyApplicationsForManagement

CO1: Apply IT concepts from business perspective
CO2:Define differentdevicesandsoftwareused inmanagement.
CO3: Use IT Applications for Management**.**
CO4:Explaindifferentinputandoutputdevices.
CO5:Describedifferentinformationsystems usedin management.

InformationTechnology-Lab

CO1:ApplyITconceptsfrombusinessperspective
CO2:Define differentdevicesandsoftwareused inmanagement.
CO3: Use IT Applications for Management**.**
CO4:Explaindifferentinputandoutputdevices.
CO5:Describedifferentinformationsystems usedin management.

ManagerialEconomics

CO1: Understand micro economic environment, effective managerial decision-making process
CO2:Understand ofthetheoryandanalyticaltoolsthatcanbeusedindecision-makingproblems. **CO3**: Analyze Production and cost concepts
CO4:Market structures and theprice determination
CO5:Formulatethemintoamanagerialmodeltowhichdecisionmakingtoolscanbe applied.

FinancialAccountingandAnalysis

CO1:Definefinancial accountingandaccounting equations
CO2:Constructionofbalancesheet
CO3:Useofdepreciationmethodsandvaluationmethods
CO4: Analyse financial statements and financial ratios
CO5: Explain fund flow and cash flow statements

Statisticsfor Management

CO1:Describeaboutprobabilityandstatisticaltools.
CO2:Explain basicconceptsofprobability
CO3:Explainthedistributionsof probability.
CO4:Analyzedifferenttypesofsamplingmethodsandlargesample test.
CO5:Formulatesmallsample test.

PrinciplesofMarketing

CO1: Understand various facets of market, and its behavior.
CO2:Applythevarioustoolsformakingstrategiesinthemarkets
CO3: Create a marketing mix to bring sustainable profits
CO4:Constructthe promotionaltoolsformarketingaproduct.the
CO5:Analyzethevarioussituationsandstagesinbuyingprocess.

BusinessLawandEthics
CO1:Understandaboutself,strengthsandweakness.
CO2: Identify ones potential, self-image, and skills
CO3: To analyze the various thinking process
CO4:Todeveloplifecopingstrategies
CO5:Todevelopproblemsolvinganddecisionmakinginlife situations.

Value Education and Personality Development **CO1**:Understandaboutself,strengthsand weakness. **CO2**: Identify ones potential, self-image, and skills **CO3**: To analyze the various thinking process
CO4:Todeveloplifecopingstrategies
CO5:Todevelopproblemsolvinganddecisionmakinginlife situations.

HumanResourceManagement
CO1:UnderstandHRMintheglobalperspectiveandasastrategicbusinesspartner
CO2:Know moreabout howtoacquire manpower,theselectionprocessandthetrainingprocess
CO3:Understandcareerintheholistic perspective
CO4:Understandthedifference inmentoringandcoaching
CO5:Contemporaryissuesintalentmanagement,thecompetencelevelsof employees

EconomicEnvironment&Policy
CO1:Able tounderstandtheconceptofeconomic environmentanditsimpactoneconomy.
CO2: Know the nature and scope of business environment.
CO3:Examinethevarioustheoriesofincomeandemployment.
CO4: Know the concept of inflation, theories and its causes.
CO5:Understandtheevolutionandstructureof Indian FinancialSystem.

FinancialManagement
CO1:Definefinancial functionsandgoals
CO2:Useproject evaluationtechniquesandapproaches
CO3:Analysecapital structure
CO4:Applydividendpoliciesand decisions
CO5:Explain workingcapital financing

QuantitativeMethodsforDecision Making
CO1:Describevariousquantitativetechniquesandtoolsthathelpindecisionmakingindifferent functional areas in industries.
CO2: Formulate concepts of linear and nonlinear Programming problems using different methods.
CO3:SolvelinearprogrammingproblemsusingSimplexmethodandtheconceptsofTransportation problem and assignment problems.
CO4:Constructthe conceptsof CPMandPERT.
CO5:Explain theconceptsofqueuingtheory,gametheory and simulation.

MarketingResearch
CO1:Formulatevariousmarketingresearch projects
CO2:Identifyvariousopportunitiesandsolveproblemsinthe market.
CO3:Understandfundamentalmarketingresearchconcepts,theoriesandprinciplesinareasof marketing policy;
CO4:Constructa questionerusingscalesof measurement
CO5:Solvenonparametric testsforattitude measurement.

OperationsManagement
CO1:DefineintroductiontoOperationManagement.
CO2:Explaintheroleof operationmanagement.
CO3:Organize theschedulingandcontrolofproductionoperations.
CO4:Identity qualitycontrolmethods.
CO5:Describematerials management.

InternationalBusiness
CO1:Abletounderstandandappreciatetheinternationalbusinessenvironment.
CO2:Knowtheimportance, emergenceanddrivers of globalization.
CO3:Understandthevariousstages andapproaches ininternationalbusiness.
CO4:Examinethedifferentlevels,benefitsofeconomic integration.
CO5:Know thestructure andfunctionsof WTO.

Soft Skills
CO1:Understandtheimportanceofgoalsettingandsetgoals
CO2:Planthetimefor agivenschedule and life.
CO3:Applytheetiquettetoimpressandgivegoodimpression.
CO4:Develop group discussionskills
CO5:Prepareforinterviews

EntrepreneurshipDevelopment
CO1:Explaintheconcepts andtrends ofdevelopmentinentrepreneurship
CO2: Define about the concept of evolution of entrepreneur.
CO3:explainvariousfactorsaffectingentrepreneurialgrowth. **CO4**:
Describe how to prepare a business plan.
CO5:Identity theconcept ofventurecapitalfinancing andangelinvestors.

FinancialServices
CO1:Describeinnovativefinancialproductsand services andtheirscopeinglobal finance market.
CO2:Define merchant banking.
CO3:Explainhirepurchase andleasing.
CO4:Distinguish discounting,typesoffactoringand forfeiting.
CO5:List creditratingagenciesandcreditcards.

TotalQuality Management
CO1:Know theimportance ofquality,conceptoftotalqualitymanagement.

CO2:Able tounderstandthedifferenttechniquesusedtoensure qualityinanorganization.
CO3:Understandthevariousmeasurementtools,analytical toolsandcontroltoolstocheck the quality.
CO4:Analysethequantitativetechniquesandqualitativetechniquesof TQM.
CO5:Examinetheimportance ofsixsigma inan organization.

SupplyChainManagement
CO1:Know theimportance ofquality,conceptoftotalqualitymanagement.
CO2:Able tounderstandthedifferenttechniquesusedtoensure qualityinanorganization.
CO3:Understandthevariousmeasurementtools,analytical toolsandcontroltoolstocheck the quality.
CO4:Analysethequantitativetechniquesandqualitativetechniquesof TQM.
CO5:Examinetheimportance ofsixsigma inan organization.

StrategicManagement
CO1:Able tounderstandthestepsinvolvedinstrategic managementprocess.
CO2:Knowthesignificance and frameworkforindustryanalysis.
CO3:Analysetheimportanceofbalancescorecardanddifferenttypesofstrategiesusedatcorporate and business level.
CO4:Understandthevariousactivities,benefits,growth anddrivers of outsourcing.
CO5:Examinethevariousstagesinvolvedintheindustry lifecycle.

FinancialRiskManagement
CO1:Interrelate theriskandtoolsandtechniquesof riskmanagement.
CO2:Defineintroductiontoriskmanagement.
CO3:Describe measurementandmanagementof riskusingderivatives.
CO4:Explain types of derivatives.
CO5:Classifytypesof SWAPS.

CompensationManagement
CO1:Understandthecompensationcontextand thesystem todesignpackages
CO2:Differentiatethetraditionalandmodernpaypackages
CO3:EstablishpayplanswithHRstrategy andbusinessstrategy
CO4:Design competitivesystemswithinternal andexternal equity
CO5:Labour legislationsindesigningthe applicationofthecompensationsystems

ProductandBrandManagementC
O1: Develop a product policy
CO2:Understandvarioustheoriesonproductlifecycle
CO3:Applythe theoriestodevelopanew product
CO4:Organizetheproductsinvariousperceptionmapsforsegmentationandnew productcreation.
CO5:Developingalaunchingof product

Investmentmanagement
CO1:Definefundamentalsoffundamental management
CO2:Explainbondvaluationtechniques
CO3:Constructportfolioriskandreturn

CO4:Identify over-priced andunderpricedsecurities
CO5:Analyse fixedincome securities

Organizationaldevelopment
CO1:Understandtheproblemsolvingapproach attheorganizationlevel
CO2:Willknowthe importanceofvaluesandbeliefs systemsofthe organization
CO3:Different theoriesofchangeandmodels
CO4:Develop interventionstoevaluateOD programs
CO5:ConceptofTeam andtheorganizationalconfrontationapproaches

IntegratedMarketingCommunications
CO1: Prepare a promotional plan
CO2:Todifferentiatethe responseprocessamongconsumers.
CO3:Designaadvertisingstrategy
CO4:Applythe personalsellingprocess.
CO5:Understandvarioussalespromotiontools.

InternationalFinance
CO1:Define internationalfinancial system
CO2:Analyseforeign exchangemarket
CO3:Identify riskmanagementinmultinationalcorporations
CO4:Determineinternationalmoney markets
CO5:Explain riskmanagementinmultinationalcorporations.

Performance&KnowledgeManagement
CO1:Understandtheperformancemanagement systems intheorganization
CO2:Differentappraisalsmethodsprevalentinthe industry
CO3:Knowmoreaboutperformancereviewsandimprovementstrategies
CO4:Benchmarking and howcompetitorshavetheirperformancemanagementsystems
CO5:Competency assessmentof individuals

ConsumerBehavior
CO1:Analyzetheimpactofconsumerpersonalityandmotivationonpurchase behavior.
CO2:Analyzelearningprinciplesin marketing
CO3:Understandthelifecycleinfluenceonpurchase behavior.
CO4:Todistinguishthe consumerdecisionmakingprocess.
CO5:Toclassifythebehavior of consumersbasedonconstructs.

Cost&Management Accounting
CO1:Formulatethevariousobjectivesof costcontroltechniques
CO2:Usecontroltechniquesandmanagement
CO3: Analyse standard costing and variance
CO4: Evaluate strategic phrases
CO5:Explain activitybased costingmethods

Leadership& ChangeManagement

CO1:Examinethepurpose ofleadership development
CO2:Leadership developmentthrough companyrunprograms
CO3:Understandtheempowermentprogramsandmentoringprograms
CO4:Change conceptsandthe perspectivesof change
CO5:Contemporary modelsofchange management

Services&Retail Marketing

CO1:Understandtheservicesector,itscustomers
CO2:Distinguish theservicemarketing mix
CO3:Createstrategies toovercome4Is ofservices
CO4:Understandthefactors influencing retail
CO5:Formulatestrategiesforasuccessfulretail outlet.

M.Sc.Biotechnology

Programme Outcomes

PO1:ScientificKnowledge. ApplytheknowledgeofScience,Mathematics,Engineering& Technology fundamentals to solve the complex problems**.**

PO2:.**Design/development of solutions**: Design solutions for complex engineering problems anddesignsystemcomponentsorprocessesthatmeetthespecifiedneedswithappropriate considerationforthepublichealthandsafety, andthecultural,societal,andenvironmental considerations.

PO3:Problemanalysis: Identify,formulate,researchliterature,andanalyzecomplexscientific problemsreachingsubstantiatedconclusionsusingfirstprinciplesofmathematics,natural sciences, and engineering sciences.

PO4:Moderntoolusage: Create,selectandapplyappropriatetechniques,resources,modern technology and IT tools to complex science and technological activities.

PO5:Environmentandsustainability: Understandtheimpactofprofessionalscienceand technological solutions in societal and environmental contexts and for sustainable development.

PO6:Individualandteamwork: Functionobjectivelyasanindividualandasamemberin diverse teams.

PO7:Communication: Communicateeffectivelyoncomplexscience&technologyactivities with society at large and able to write effective reports and documentation.

PO8:Life-longlearning: Recognisetheneedandabilitytoengageinindependentandlifelong learning in the context of technological change.

ProgrammeSpecificOutcomes:

PSO1: StudentswillgainandapplyknowledgeofBiotechnologycomprisedofscienceand Engineering components to solve problems related to field of biotechnology.

PSO2: Studentswillbeabletodesign,performexperiments,analyzeandinterpretdatafor investigating complex problems in the area of biotechnology

PSO3: PostGraduatestudentswillbeabletodecideandapplyappropriatetoolsandtechniques in biotechnological manipulation.

PSO4: PostGraduatestudentswillbeabletojustifysocietal,health,safetyandlegalissuesand understand his responsibilities in biotechnological engineering practices.

PSO5: PostGraduateswillbeabletounderstandtheneedandimpactofbiotechnologicalsolutions on environment and societal context keeping in view need for sustainable solution.

PSO6: PostGraduateswillbeabletoundertakeanyresponsibilityasanindividualandasateam in a multidisciplinary/ cross cultural environment

PSO7: PostGraduatesStudentswilldevelop oraland writtencommunicationskills.

Genetics

CO1: Explainsthebasicsofgenetics,Mendel'slawsanddominance-recessiverelationships

CO2: Givesdetailedinformationaboutchromosomesandpedigreeanalysisinman

CO3: Explainsthevariationsinchromosomalstructureandnumbers

CO4: Describeslinkageandgenemappingconcepts

CO5: ClearlygivesinformationaboutOrganellarinheritanceincontrasttoMendelianinheritance

CellBiology

CO1: Structuresandpurposesofbasiccomponentsofprokaryoticandeukaryoticcells, especially membranes, and organelles.

CO2: Howthecellular componentsare used inproteinsortingthrough variouspathways.

CO3: HowCellSignallingWorksandhowcellswillcommunicatewiththesurroundingcells& can have a clear understanding of the signal

CO4: Cellularcomponentsunderlyingmitoticcell division

CO5: Theknowledgehowthecellsundergo apoptosisanditsapplications

Biochemistry

CO1: ExplainsChemicalbonds,molecularinteractionsincell

CO2: Applytheknowledgeofbonds&showsinrepresentingstructureofcarbohydrates

CO3: Identifiesthestructureoflipids,relates&distinguisheswithcarbohydrates.

CO4: Compares,discriminatesthestructure&functionalrelationshipofproteins&nucleicacidswith other biomolecules in cell.

CO5: Explainsthecatalyticnature&kineticproperties&inhibitionmechanismsofenzymes.

Microbiology

CO1: ExplainsthebasicsofMicrobiology.Differentmediausedfortheirculturingandtheir identification methods

CO2: Givesdetailedinformationaboutsystemicclassificationof Bacteria,Algae,ArchaeandFungi

CO3: Explainsindetailaboutmicrobialphysiologyandtheirgrowth

CO4: DescribesaboutmicrobialgeneticslikeTransformation,Transduction,andrecombination

CO5: Clearlygivesinformationaboutclassificationofvirusesandchemotherapeuticagents

Immunology

CO1: Explainsthebasicsofimmunology

CO2: Givesdetailedinformationaboutantigensandtheirpathways

CO3: Itgivesknowledgeaboutvarioustypesof Imunoglobulinstructurestheirandfunctions

CO4: explainsaboutOrganizationofMHCcomplexandTransplantation

CO5: Summarizesaboutcellmediatedandhumoralresponsesandautoimmune diseases

MolecularBiology

CO1: Knowthelifewithmolecularfunctionalities,chemicalandmolecularprocessesthatoccur in and between cells.

CO2: Knowledgeaboutthechangesorlossesincellfunction,includesalterationsofcell function brought about by mutations and DNA repair

CO3: Conceptofgenestructureandfunction,geneexpressionandgeneregulationat transcriptional level.

CO4: Conceptsoftranslationandgeneexpressionandgeneregulationattranslationallevel.

CO5: How genes are evolved by gene rearrangements and recombination and by transposons. Developmentofsolidfoundationandrequisiteresearchaptitudeforfurtherhigherstudies on epigenetic analysis

r-DNATechnology

CO1: Explainsusageofenzymesinmolecularcloning

CO2: ApplytheprinciplesofVectorsusedinmolecularcloning

CO3: Illustrates Construction of Genomic and cDNA Libraries

CO4: Describes Techniques employed in molecular cloning

CO5: Relates Selection and Analysis of recombinant Clones

BiochemicalTechniques

CO1: Explainsdifferenttypesofchromatography

CO2: Explainsdifferenttypesofelectrophoresis.

CO3: Identifiesseparationofcellorganelles,biomoleculesbydifferentcentrifugationtechniques.

CO4: Identifies&applies,thecolorometry&sphectrophotometrytodetectbiomolecules..

CO5: Explainstheapplicationofradioisotopesinvariousmetabolicstudies

PlantBiotechnology

CO1: Use protocols for preparation of Culture Media, Cell Culture and Micro Propagation

CO2: ItrelatesthetechniquesusedforProtoplastCultureandSomaclonal VariationsinPlants **CO3:** It evaluates Production of Commercially Useful Compounds By Cell Cultures

CO4: ThisstudydifferentiatebetweenMolecularMechanisms ofAbiotic&BioticStressTolerancein plants

CO5: ItexplainsTransformationTechniquesinTransgenicPlants

AnimalandMedical Biotechnology

CO1: Thebasicsofmaintainenceofmammaliancellandgenerationofcell lineusingpropersterile techniques and optimum conditions of growth to develop mamalian cells.

CO2: To identify and comprehend experimental knowhow of various techniques involved in cell separationandquantitationusinglatesttechnology alsoknowhowtorelateandevaluatethe applications of animal biotechnology ln gene therapy, animal breeding, cloning.

CO3: Theknowledgetoknowaboutthestemcelltechnologyandregenerative Medicine.

CO4: Howgeneticdisordersarearising

CO5: Knowledgeregardingvarioustherapeutics,DNAbasedVaccine,geneproductsinmedicineand healthcare.

Bioinformatics

CO1: ItsummarizesfoundationsofBioinformatics

CO2: ToexplainsmethodsforComparisonandevaluationofdata

CO3: Analysis of Genomic Applications of Bioinformatics
CO4: AnalysisofProteomicApplicationsofBioinformatics **CO5:**
It summarise Applications of Bioinformatics

FermentationTechnology
CO1: ExplainstheProcessoffermentation.
CO2: Summarizesthedifferenttypesofdesignsoffermentorsandoperations.
CO3: Identifies&relatesmicrobiologicalandthefermentationmedia,illustratestheprinciplesofupstream processoffermentation
CO4: Compares,discriminatestheproductisolationwithproductpurificationmethods.Explains&nterpretes the product purification strategies
CO5: Evaluates,relatestheprinciplesofupstream&downstreamprocessoffermentationindifferent fermentative productions

Biostatistics,EthicalIssues&ResearchMethodology
CO1: IntroductiontoBio-Statistics
CO2: DescriptiveStatistics&ProbabilityDistribution
CO3: StatisticalInferenceofQualitative&QuantitativeVariables
CO4: Itdescribesimportanceofethicsinlife.Itvaluatesgoodlaboratoryandmanufacturingpractices.
CO5: Integratestrainingfromdifferentsourcestosolve aproblemduringresearchandwritinga publication

FoodBiotechnology
CO1: Explainsthenutrientspresentindiet&aspectsoffooddifferentfoodadditives.
CO2: Summarizesthedifferentmethodsoffoodpreservation&processing
CO3: Identifiesthenutrientsinfunctionalfoods,relates&distinguishesbioactive compoundsrolein functional foods.
CO4: Compares,discriminatestheGMFoodswithfunctionalfoods.Explains&interpretsthesafetyof GM foods with traditional foods.
CO5: Evaluates,relatestheprinciplesoffoodpreservation&processinginfoodsafety

Nano-Biotechnology
CO1: Explainsnewhorizonsofsciencebyfundamentalstudyof Nanotechnology
CO2: ItextendsNanotechnologydifferentareasanditsutilization
CO3: CategorizedifferenttypesofNanoStructuresbytheirfundamentalpropertiesandutilityin different areas
CO4: SupportofNano-biotechnologyinHealthCare
CO5: SummarizestheApplicationsofNano-biotechnology

Bioelectronics
CO1: Thebasicselectroniccomponentsinvolvedintheapplicationsofbiology.
CO2: Thesimilaritiesbetweenelectroniccomponentsandbiologicallyactivematerials
CO3: VarioustypesofBiosensorsusedinbiology.
CO4: Theapplicationsofbiosensorsinvariousfieldsrelatedtobiologylikehealthcare,agricultureetc.
CO5: KnowledgeaboutBioinspiredsystems.

BasicBiotechnology
CO1: ExplainsthebasicsinBiotechnology
CO2: Givesdetailedinformationaboutconceptsin Genetics

CO3: ExplainsthebasicsinMicrobiology
CO4: DescribesconceptsofPlantBiotechnology
CO5: ClearlygivesinformationaboutapplicationsofBiotechnologyinvariousfields

MASTEROF SCIENCE–DATA SCIENCE

PROGRAMOBJECTIVES(POs)

PO1: Engage incontinuousreflective leaninginthecontextoftechnologyandscientific advancement.

PO2: Identifytheneed andscopeoftheInterdisciplinaryarea.

PO3: Understand theprofessional, ethical,and social responsibilities.

PO4: Enhancedisciplinarycompetency,employability,andleadershipskills.

PROGRAMSPECIFICOUTCOMES(PSOs)

PSO1:Abstract Thinking: Ability to understand the abstract concepts that lead to various data science theories in Mathematics, Statistics and Computer science.

PSO2:Problem Analysis and Design Ability: To identify analyze and design solutions for datascience problems using fundamental principles of mathematics, Statistics, computing data sciences, and relevant domain disciplines.

PSO3:Modern software tool usage: Acquire the skills in handling data science programming tools towards problem solving and solution analysis for domain specific problems.

PSO4:Societal and Environmental Concern: Utilize the data science theories for societal and environmental concerns.

PSO5:ProfessionalEthics: Understandandcommittoprofessionalethicsand cyberregulation.

COURSEOUTCOMES(Cos)

FIRST YEAR (2020-21)

FIRST SEMESTER

COMMUNICATIVECOMPETENCE

- Studentcanapplytheknowledgeofcommunicativecompetence toexpressthe ideasclearly

TECHNICALSEMINARANDREPORT WRITING

- Theoverallpurposeorgoalfromparticipationinaneducationalactivityforpersonaldevelopment and current trends in research.

MATHEMATICSFORDATASCIENCE

CO1: Construct mathematicalargumentsthatrelatetothestudyofintroductorylinear algebra.
CO2: Analyzefiniteandinfinitedimensionalvectorspacesandsubspacesoverafieldandtheir properties, including the basis structure of vector spaces.
CO3: Usethedefinitionandpropertiesoflineartransformationsandmatricesoflinear transformations and change of basis, including kernel, range and isomorphism.
CO4: Explain orthogonality on vector spaces and compute inner products and, including Gram-Schmidt orthogonalization.
CO5: Demonstrate knowledge and understanding of topics including, divisibility, prime numbers, congruence, Diophantine equations.

ARTIFICIALINTELLIGENCE

CO1: DefinesArtificialIntelligence,StateSpace,ProductionSystems
CO2: Explains about Heuristic Search Techniques and demonstrates about Knowledge Representation using Predicate Logic.
CO3: DifferentiatebetweenProceduralKnowledgeversusDeclarativeKnowledgeandexplains about symbolic Reasoning under Uncertainty.
CO4: Compares thevariousWeakSlotFillerStructuresandStrongSlotFiller Structures.
CO5: ConstructsthealgorithmsrelatedtoGamePlaying andPlanning.

STATISTICSAND PROBABILITY

CO1: Toexaminedifferent conceptsofprobabilityandapplytheminreallife applications.
CO2: Tomakeuseofdifferentconceptsofrandomvariablesinunderstandingscopeof different distributions.
CO3:Toutilizedifferentconceptsofexpectationsinunderstandingthecharacteristicsof distributions.
CO4: Tounderstand therelationshipsbetweendifferent discretedistributions.
CO5: To explain the different characteristics of continuous distributions and understand which one to use for different cases.

PYTHONFORDATA SCIENCE

CO1: Applythe conceptofoperators,variables,expressions,andstatements.
CO2: Applythe conceptoffunctionsand recursivefunctions.
CO3: List the operations performed on strings and identify the differences between lists and dictionaries.
CO4: Explain Files,Modules,andPackages.
CO5: Applythe conceptsof InheritanceandPolymorphism.

ADVANCEDDATABASES

CO1: DesignadatabaseforasystemusingE-RdatamodelandRelationalDatamodel.

CO2: Design logicaldatabasewithallintegrityconstraintsoverrelations.
CO3: Applynormalizationstepsindatabase designandremovalof dataanomalies.
CO4: Extendthecharacteristicsofdatabasetransactions.
CO5:Distinguishthedifferenttypes ofNoSQLdatabases

DATAVISUALIZATIONLAB

- Able tolearnhowtocustomizethedata
- Abletounderstandhowtoextractthedata
- Abletoperformfieldoperationsandeditingmetadata
- Abletopractice onworksheets
- Applydifferentfunctionsandcalculations
- Practicesondifferentchartsandhistograms

PYTHONFORDATASCIENCELAB

- AbletodevelopprogramsinPython.
- Abletoimplementfunctionsusingparameters.
- Understandtheconceptof expressions.
- Constructprograms usingControlstructures
- Listtheoperationsthatcan beperformedonstrings.
- Identifythedifferencesbetweenlistsand dictionaries.
- Listtheconceptsof polymorphism.

ADVANCEDDATABASES LAB

- Designandimplementadatabaseschemaforagiven problem-domain.
- Populateandquery adatabaseusingSQLDML/DDLcommands.
- Declareandenforceintegrity constraintsona database
- RetrievedatausingdifferentSQLjoins,subqueries,and correlatedqueries.
- Utilizethetechniquesusedtocreate,insert, update,and delete data/documents.
- Utilizevarioustechniques usedtoquerythe database.
- Utilizetechniques tooptimizequeryingusingindexing.
- Applymethodstoanalyzedatausingaggregationtechniques.
- Adoptknowledge abouttheroleof NoSQLinbusiness.
- Identifytechniqueofsplittingdataacrossmachines via sharding.

SECONDSEMESTER

HUMANVALUES&PROFESSIONALETHICS

- Thestudentwilllearnaboutthehumanvaluesandprofessionalethics.

INDUSTRIALPRACTICES

- Exposestudenttowork,responsibilityandtheethicsinworkingenvironment.
- Communicateeffectivelywithintheworkingenvironment.
- ExposestudentstogeneralandspecificprocedureofData sciencefield related toIndustry
- Usethetheoretical knowledgeforsolvingtheIndustryproblems.
- Applicationofpreparationfortheirfinal year subjects,mini,majorprojects,andplacement.

MANAGEMENTANDORGANIZATIONALBEHAVIOUR

CO1: Understand theconceptand process ofmanagement andorganizationbehavior.
CO2: Examinethehistoricalrootsofcontemporarymanagementpractices.
CO3: Analyzethetraditionalandcontemporaryorganizationaldesignsanditsstructures.
CO4: Knowthe varioustheoriesofmotivationandleadership.
CO5: Understandtheorganizationalpolitics,conflictcausesandconsequencesinwork environment.

DATASTORAGETECHNOLOGIESAND NETWORKING

CO1: Explain how to manage the capacity, performance, and reliability of large numbers of disks.
CO2: LearnhowIntelligentStorageSystemsprovidehighlyoptimizedI/Oprocessingcapabilities. **CO3:** Understands importance of NAS and identify how NAS improves the performance.
CO4: Compareobject-based storageandunifiedbased storage
CO5: Apply to organizations for an effective and cost-efficient disaster recovery and restart procedures in both physical and virtual environments.

DATASECURITYANDPRIVACY

CO1: Applythe need ofcomputersecurity.
CO2: Identify thedifferencesbetween differenttypesof ciphers.
CO3:Explainvariousfeatures ofdigital signature.
CO4: Identify thedifferencesbetween cryptographichash functions.
CO5: Understandthefeaturesof steganography.

TIMESERIESANALYSISANDFORECASTINGTECHNIQUES

CO1: Identifying linear, quadratic, Gompertz and Logistic models where appropriate and describe models for seasonal variation. Also explains the methods used to study cyclic components.
CO2: EstimateseasonaleffectsoftimeseriesdatabyusingWinten'smethod,Brown's,Box– Jenkin's three-parameter exponential smoothing method.
CO3: ToutilizeAR,ARIMAmodelsfortimeseriesdataandtoforecastthedatausingthese models.
CO4: To interpretSARIMAmodelandcriterionused tostudythem.
CO5: Toexplainandverifymathematicalconsiderationsforanalysingtimeseries,includingconcepts of stationarity, autocovariance, autocorrelation.

REGRESSIONANALYSISANDINFERENTIALSTATISTICS

CO1: To explain the concepts of estimation and testing of hypothesis which used for drawing thestatistical inference.
CO2: To apply the idea of sampling distributions of different statistics in testing of hypothesis.
CO3: Todevelopadeeperunderstandingofsimplelinearregressionandtestforthequalityofitsfit. **CO4:** Interpret multiple linear regression model parameters and to understand the modelselection. **CO5:** To estimate the effect of outliers and to understand the concepts of non – linear regression.

DATAMINING

CO1: Implementbasicconceptsofdata miningsystem
CO2: Toapplytheknowledgeof datawarehouse conceptsfor realworldproblems.
CO3: Todevelopbusinessstrategies.
CO4: Tocomparevarioussupervised learning.
CO5: Tocomparevariousunsupervised learning.

MACHINELEARNING

CO1: Defineawell-posed learning problem.
CO2: ExplainLinearModels
CO3: Illustratethedecisiontreelearning algorithmandhypothesisspacesearch.
CO4: ApplyKmeansAlgorithm&Genetic algorithmsinmachine learning.
CO5: ExplainGraphicalModels

DATAANALYTICSLAB

- Apply the concepts of graphical representation, descriptive statistics, correlation, and regression analysistoolsforthestatisticaldata.Demonstratetheconceptsofpointandintervalestimationof unknown parameters and their significance using small samples. Apply the idea of sampling distributions of difference statistics in testing of hypotheses

DATAMININGLAB

- Thestudentwilllearnhowtosolvecorrelationandregressionproblemsusing R.
- Thestudentwithexistingdatasetswilldopreprocessingofthe data.
- The student will be able to apply various classification algorithms on the data sets by using R commands.
- Thestudentwillacquireknowledge about variousclusteringalgorithmsand its use.
- Thestudentwillcometoknowaboutfactanddimensionaltableandvariousoperationson warehouse data.

MACHINELEARNINGLAB

- LearntoLoaddatasets.
- Learn about the various libraries offered by Python to manipulate, preprocess, and visualize data.

- Learn the technique to reduce the number of variables using Feature Selection and Feature Extraction.
- Learninbuildingmodelsandmodelpersistenceusingregression,classification.
- Learn various machinelearning algorithms likeKNN, Decision Trees, SVM, and Clustering in detail.

SECONDYEAR(2021-22)

SOFT SKILLS

- Thestudentwillbeabletodevelopeffectivecommunicationskills,presentationskills, inter-personal skills, team management skills, and leadership skills.

MINI PROJECT

- The program prepares the students to take up positions as Systems Analysts, Systems Designers, Data scientist, Programmers and Project Managers in any field related to data science and analytics.

DEEP LEARNING

CO1: Learnthefundamentalprinciplesofdeeplearning.

CO2: Identifythedeeplearningalgorithmsforvarioustypesoflearningtasksinvariousdomains.

CO3: ToexploreDeeplearningtechniquesandvariousfeatureextractionstrategies. **CO4:** To mathematically understand the deep learning approaches and paradigms. **CO5:** Implement deep learning algorithms and solve real-world problems.

CLOUDCOMPUTING

CO1: Illustratethemainconcepts,features,challenges,andrisksincloudcomputing.

CO2: Describevirtualizationofclustersand Datacentres,virtualclusters,andresourcemanagement.

CO3: Identifythearchitecturesovervirtualizeddatacentres.

CO4: Explainthecoreissuesofcloudcomputingsuchascloudsecurityandtrustmanagement.

CO5: Comparevariouscloudprogrammingandsoftwareenvironments.

SOCIALMEDIAANALYTICS

CO1: Identify variousplatformsinsocial media.
CO2: Understand processingofsocialmedia.
CO3:Comparedifferences betweentwitterandothersocialmedia networks.
CO4: AnalyzeFacebook informationand writebusiness cases.
CO5:DifferentiatesocialmedianetworksInstagram(i.e.,usageofinstagramanddata processing techniques also they will get idea)

MULTIVARIATEANALYSISANDSTOCHASTICPROCESS

CO1: Understandthebasic conceptsofmultivariate distributions.
CO2: Summarizeandinterpret MANOVAtechniques.
CO3: Understandtheprinciples andcharacteristicsofthemultivariatedataanalysistechniques.
CO4: Describe aMarkov chainanditstransitionmatrix.
CO5: DeterminethestationarydistributionsofaMarkovchain.

INTERNETOF THINGS

CO1: **Identify** the importance of IOT and its applications.
CO2:**Differentiate**betweenIOTandM2M,SDNandNFV **CO3**:
Apply IOT design methodology.
CO4:**Understand**buildingofIOTdevicesand Raspberry PI.
CO5:**Explain**workingofapplicationof IOT

BIGDATA ANALYTICS

CO1: AbletounderstandtheBigDataconceptsinrealtimescenario.

CO2: UnderstandthearchitectureofHadoopandapplymapreduceconcepts.

CO3:UnderstandingHadoopYARNArchitecture

CO4: UnderstandandexploringHIVE.

CO5: Analyzing DatawithPIG

NATURALLANGUAGEPROCESSING

CO1: UnderstandvariousapproachesonsyntaxandsemanticsinNLP.

CO2: Applyvariousmethodstodiscourse,generation,dialogueandsummarization using NLP.

CO3: Analyze various methodologies used in Machine Translation, machine learningtechniquesusedinNLPincludingunsupervisedmodelsandtoanalyze real timeapplications.

INTERNETOFTHINGSLAB

- ToImplementIoTbasedPractical's.

BIGDATAANALYTICSLAB

- ImplementfilemanagementtasksinHadoop.
- ApplyMapReducePrograms.
- UnderstandinstallationofPIGandPIGLatin Scripts

NATURALLANGUAGEPROCESSINGLAB

- ImplementthemethodologiesusedinMachineTranslation,machinelearnin gtechniquesusedinNLPincludingunsupervisedmodelsandtoanalyzereal timeapplications.

FOURTHSEMESTER

PROJECT

- The student will be able to describeData Collection, Data Visualization, Labelling, Data Selection,DataPre-processing,Datatransformation,ModelTraining,Modelevaluation,Model testing, Accuracy, and deployment.

M.Sc.FOODSCIENCEANDNUTRITION

PUBLICHEALTHNUTRITION

CO1PublicHealthNutritionand HealthCareSystem

CO2PopulationDynamics

CO3PublicHealthAspectsofundernutrition

CO4Approaches/StrategiesforImprovingnutritionstatusandhealthstatusofthe community.

CO5FoodandNutritionSecurity

FOODMICROBIOLOGY&FOOD SAFETY

CO1 Overview of Basic Microbiology

CO2 Food Spoilage and Preservation

CO3MicroorganismsinHumanWelfare

CO4 Food Hygiene

CO5FoodsafetyandQualityControl

RESEARCHMETHODS

CO1Implementbasicconceptsofdataminingsystem

CO2Toapplytheknowledgeofdatawarehouseconceptsforrealworldproblems CO3

To develop business strategies

CO4 To compare various supervised learning

CO5Tocomparevariousunsupervisedlearning.

THERAPEUTICNUTRITION

CO1NutritionalAssessment&CareofPatients

CO2WeightManagement&DiabetesManagement

CO3 Cardiovascular Disorders & GI Tract Disorders.

CO4LiverandGallBladderDisorders&RenalDisorders.

CO5 Overview of Some Degenerative Disorders.

HUMANVALUES&PROFESSIONALETHICS

CO1Implementbasicconceptsofdataminingsystem

CO2Toapplytheknowledgeofdatawarehouseconceptsforrealworldproblems CO3

To develop business strategies

CO4 To compare various supervised learning

CO5Tocomparevariousunsupervisedlearning.

DEPARTMENT:B.COMBUSINESSANALYTICS ISEMESTER

.PROGRAMMESPECIFICOUTCOMES(DEPARTMENTAL):

Studentswillbeableto:

PSO1. Hands-onlearningofleadinganalyticstools.

PSO2. Toacquiretheoreticalknowledgeofdatasciencetools,butwillalsogainexposuretobusinessperspectives.

PSO3. The Career opportunities after completion of B.Com (BA) degree are Business Analyst, Quantitative Analyst, Operations ResearchAnalystandMarket research Analyst

PSO4. Prospectivecareeropportunitiesandgrowthinthefieldofbigdataanalytics.

PSO5. Learningtrendingprogramminglanguagesforcareeradvancements.

BUSINESSENGLISH–I

CO1
:Studentswillbeabletoidentifyelements,formsandstyleoflettersandwillbeabletocreatequotations related to inviting, sending and placing orders.

CO2: Students will be able to identify qualities and functions of a Sales Letter inordertoenablethem to use the format of a Sales Letter.

CO3 **:** Tounderstandandwritethefunctions,structureand types of Memorandum and design anotice, agenda and minutes.

CO4: Todemonstratetheguidelinesforansweringandmakingeffectivetelephonecallsinordertoenable understanding and implement Note making.

CO5: Tohaveabetterunderstandingofscanningandproofreadingincomprehension

INDIANHERITAGE&CULTURE

CO1: Thestudent can understand better about the origin of ancient Indian culture and thecontributionsofgreatrulersfrombothnorthandsouthIndiaforIndianculture inancientdays

CO2: StudentswillanalyzehowPersianculture enteredintoIndiaandhowitinfluencedtheFineArts of Indian society like Classical Music, Dance and Architecture.

CO3: StudentsareabletoassesshowtheIndianorthodoxsocietyturnedintomodernandwesternsociety in the 19th century .It also edifies the students with spiritual doctrines of various Religions.

CO4:
Studentswillevaluatevariouschallengesfacebytheyouthandtheevileffectsofterrorismonsociety

CO5:

Thetopicsintheunitcreatebelongingnessamongthestudentsbybringingawarenessoftherightsandduti estomaketheworldabetterplaceanditthrowslightongendersensitizationissues of women, Children and LGBT.

BUSINESSORGANIZATIONANDMANAGEMENT

CO1: Identifyandinterpretthevariousprinciplesandimportanceofmanagement
CO2: Explainanddemonstratetheusesofplanningandorganizing
CO3: Classifyandcombinethevarioustechniquesofcontrolandcoordination
CO4: Pointoutanddeveloptheessenceofmotivationanddirectiontothestudents
CO5: Interrelateandunderstandtheessenceofleadershipandtheimportanceofcommunication

DATA-DRIVENDECISIONMAKING

CO1: ToIdentifyandillustratetheBusinessAnalyticsPrinciplesandprerequisites
CO2: Todemonstrateandapplythestepsinvolvedin BusinessAnalyticsecosystem
CO3: ToUnderstandtheDataLifeCycleManagementandidentifygatheringprocessandanalyzewhy requirement gathering process
CO4: Toappropriatethevarioustypeof Requirementsgatheringprocessandanalyzewhyrequirement gathering process
CO5: Tointerprethowtherequirementgatheringfitswiththedevelopmentofacustomerjourneymap.

FUNDAMENTALSOFINFORMATIONTECHNOLOGYCOURSE CODE:BC22003

CO1: Describetheneedandimportanceofaccounting
CO2: Explainaboutsubdivisionofjournal
CO3: Comparethecashbookandpassbookbalancestoreconcilethedifference
CO4: Analyzethefinancialpositionofanorganization
CO5: Identifythemistakesinbooksofaccountsandhelpsincorrectingthem

FINANCIALACCOUNTING–I

CO1: Describetheneedandimportanceofaccounting
CO2: Explainaboutsubdivisionofjournal
CO3: Comparethecashbookandpassbookbalancestoreconcilethedifference
CO4: Analyzethefinancialpositionofanorganization

CO5: Identifythemistakesinbooksofaccountsandhelpsincorrectingthem

DATAANALYTICSMODELING

CO1: UnderstandtheimportanceofAnalyticsinBusiness
CO2: ApplyDataCleaningTechniquesonrawdata
CO3: DemonstrateETLProcess
CO4: ExplaintheconceptofDataWarehousing
CO5: UnderstandthevariousformsofData

FUNDAMENTALSOFBUSINESSANALYTICSCOURSE

CO1: UnderstandbasicconcepttoR
CO2: Demonstrateprogrammingconceptanddatastructurein R
CO3: Analyzelargeproblembysubdividingitintosmallercomponentsusingfunctions
CO4: Chooseanappropriategraphicforanalysisandanalyzedatausingsummary
CO5: Choosethetypeofregressionbasedonthedata set.

ADVANCEDACCOUNTING

CO1: Statevariousmethodsforpreparingbranchaccounts
CO2: Describetheallocationandinterdepartmentaltransferofexpenses
CO3: Analyzethefinancialpositionofnon-tradingconcern
CO4:
Evaluatethedifferentsituationofcapitalissuetopublicissueofsharesatpar,premiumandforfeiture
CO5: Explainaboutsourceoffundsthroughissueofdebenturesandvariousmethodsofredemption

DIGITALMARKETING

CO1: The aim of digital Marketing course is to provide students with the knowledge aboutbusinessadvantagesofthedigitalmarketinganditsimportance
formakingsuccess;todevelop a digital marketing plan
CO2:
Howtomanagecustomerrelationshipacrossalldigitalschannelsandbuildbettercustomerrelationships, to create a digital marketing plan
CO3: Howtointegratedifferentdigitalmediaandcreatemarketingcontent:howtoSEOoptimization
CO4: Differentiatethedigitalmarketingstrategiesamongdifferentdigitalandsocialmediaplatforms
CO5: Analyzingconsumerbehavioranddevelopingsegmentationtargetingandpositioningstrategies

BUSINESSSTATISTICS–I

CO1: Understandmeritsandlimitationsofstatisticaldataandtypesofcollectionofdata.Represent statistical data in the form of diagrams and graphs.
CO2: Understandtherelationbetweenvariablesandpredictthedata.
CO3: Understandthevarioustypesoftrends.
CO4: Studentswouldbeabletocalculatemeanandproportionsandcanmakeimportantdecisionsfrom a

few samples which are taken out of unmanageably huge populations.
CO5: StudentwouldbeabletocalculateANOVAbyonewayandtwo-wayclassification

MARKETINGMANAGEMENT

CO1: Explaintheconceptofmarketingandsketchesthemarketingenvironment
CO2: Classifythemarketandidentifiesthevariousmarketsegments
CO3: Pointoutthemarketingmixwithreferencetoproductandprice
CO4: Analyzethepromotionmixandthechannelsofdistribution
CO5: Explainservicemarketingmixandpointsouttheimportanceofdirectandonlinemarketing

INTERNATIONALBUSINESS

CO1: Toknowoverview–Internationalbusiness
CO2: TodemonstrateGlobalBusiness,GATTandTRIPsandTRIMS-WTOandIndia-UNCTAD
CO3: ToexplainGlobalMarketentryStrategiesandOwnershipStrategies
CO4: TounderstandtheConceptualframeworkofE-Business,E-businessTechnologyandEnvironment
CO5: ToanalyzetheManagingGlobalBusinessandInterculturalHumanResourcesManagementin Global Context

CORPORATEGOVERNANCEANDBUSINESS ETHICS

CO1: Toidentifyandexplaintheimportanceofvaluesandethics
CO2: Toanalyzeandinterpretthevarioustheoriesofethicalvaluesystem
CO3: Topointouttherelationshipbetweenlawandethicsandunderstandtheimpactoflawonbusiness
CO4: Toexplainthevariouscorporategovernancecodes,transparencyanddisclosureinthecorporate
CO5: Toidentifyandpointouttheglobalissuesofgovernance

FINANCIALDECISIONMAKING–I

CO1: Toidentifyrelevantfinancialdatausedinmakingbusinessdecisions
CO2: Examinethefinancialaccountingelementstobeconsideredwhenmakingadecisionthatimpacts

and entity's financial position
CO3: Understandthefinancialmarketstructureanditsimpactonthefinancialstructureofacompany
CO4: Todemonstratethetechniquesofworkingcapitalmanagement
CO5: Toappraisemergersandacquisitionsforrestructuringofcorporation

ADVANCEDDATAVISUALIZATION

CO1:
Studentswillbeabletodemonstrateskillstousemoderncomputingparadigmsandcomputing platforms on data
CO2: Tofamiliarizethestudentswithfundamentalconceptsofdatavisualization.
CO3: Studentswilllearnandunderstandthebasictoolsusedforvisualizingdata
CO4: Tousemoderncomputingparadigmsandcomputingplatforms
CO5: Tofamiliarizestudentswithfundamentalsconceptsofdatavisualization

INTERNATIONALFINANCIALREPORTING-I

CO1:
Tocriticallyanalyzetheinternationalaccountingstandardsandtheirimplicationinthefinancials tatements
CO2: Tounderstandthestructureoftheframeworkofinternationalaccounting
CO3: Tolearndisclosurerequirementsforcompaniesintheformoffinancialnotesandreports
CO4: ToexaminethefundamentalrequirementsofIFRSonastandard-by-standardbasis
CO5: ToprovideguidanceonhowtouseIFRSinpractice

FINANCIALPLANNINGANDPERFORMANCE

CO1: Understandthenuancesinthestrategicplanningprocess
CO2: Learnthetechniquesofdraftingallkindsbudgetsandtheroleinfinancialgoalsetting
CO3: Examinetheimportanceandapplicationofcrucialcostcontrollingmethodologies
CO4: Demonstratethevariousperformancemeasuresanditsimplicationoncompany'sprofitability
CO5: Understandcomputerizedtechniquestoanalyzethefinancialperformance

INTERNATIONALMARKETINGANDEXPORTMANAGEMENT

CO1: Toanalyzetheprocessofinternationalmarketingandclassify
CO2: ToDescribetheimportantfactorsoftheinternationalmarketingenvironment,differentiate marketing research, market selection and market segmentation.
CO3: Analyzetheimportanceofproductionanddistributionstrategies.
CO4: Differentiatetheneedforpromotionmixstrategiesandpricingdecisions
CO5: Explainforeignexchangestrategies,differentiatebalanceofpayments,balanceoftradeand interpret international economic organizations.

II SEMESTER

BUSINESSENGLISH–II

CO1: Students will be able to identify the elements of the claimandadjustmentletter.Studentswillalsobeableto draft claim letters and adjustment letters.

CO2: They will be able to identify the nature and types of creditletters.Studentswillbeabletorecognizethetone and style of the collection letter.

CO3: Students will comprehend the general guidelines to write application letter and resume, they will also be abletoexecutetheformandcontentoftheapplication letter and resume.

CO4: Studentswillalsobeabletounderstandcharacteristics and importance of business letters. They will also be able to prepare a good business report

CO5: Students will be able to understand the techniques of describingmachinesandmechanisms.Theywillalsobe able to describe and create good technical reports

VALUEEDUCATIONANDPERSONALITYDEVELOPMENT

CO1: Identifyacceptednormsandcountervalues& differentiatethevariousdimensionsofhuman development
CO2: Demonstrate love and experience of god along with identifyingthebasicissuesoflifeandhappinessaslife goals.
CO3: Understandtheimportanceofconcernforothersand criticizethevariousproblemsthatdeterthegrowthof society.

CO4: Recognizethetraitsofgoodpersonalityandidentifytheir personality by self exploration
CO5: Interpretthepurposeoflifeandgoalsettingsandlearn self management

FUNDAMENTALSOFBUSINESSMATHEMATICS

CO1: Tosolvelinearequations
CO2: Togetsolutionsofreallifeproblemsbyusing logarithms and set theory
CO3: Tosolvetheproblemsinbusinesslinelikebanking sector
CO4: Togetmaximumprofitsandminimumlossin company productivity
CO5: Tomeasureandareasandvolumes

MANAGERIALECONOMICS

CO1: Understandthebasictermsandconceptsusedin managerial economics
CO2: Appraisethebehaviorofconsumerthroughthe demand and indifference analysis

CO3: Interpretthebehaviorofproducerthroughsupply and production and other related concepts
CO4: Differentiate the market forms and the price and outputdeterminationsundereachtypeofmarket
CO5: Infertheimpactsofmacroeconomicsfactorsonthe business concerns

DATAANALYTICSESSENTIAL

CO1: Tounderstandthevariablesfordataanalytics.
CO2: Tocalculatemeasuresofcentraltendency.
CO3: AnalyzetheprobabilityforDataAnalytics
CO4: Evaluatethenatureforthestatisticaldatausing distributions
CO5: UnderstandingtheconceptsofstatisticsinRcase and apply vectors in R

FINANCIALACCOUNTING II

CO1: Introducestothebasicconceptsofpartnership and explains the admission of a partner.
CO2: Demonstratestheaccountingtreatmentrelatingto retirement and death of a partner
CO3: Identifiestherulesapplicableforwindingupof partnership and insolvency of a partner
CO4: Shows the method of finding out profits and financialpositionbyusingincompleterecords
CO5: IllustratesmethodofpreparingbooksunderHire purchase and installment purchase system.

IV SEMESTER

ENVIRONMENTALSTUDIES&GENDERSENSITIZATION

CO1: Tounderstandtheimportanceofecological balance for sustainable development
CO2: Tounderstandtheimpactsofdevelopment activities and mitigation measures.
CO3: ToUnderstandtheenvironmentalpoliciesand regulations
CO4: Toprovideaperspectiveonthesocializationof men and women
CO5: Toexposethestudentstodebateonthepolicies and economic works and on gender

CORPORATEACCOUNTING

CO1: Understand the various types of capital structures of the company and their representation in the balance sheet,preparationoffinancialstatementswithprofits before incorporation.

CO2: Explainthevaluationofsharesandgoodwill
CO3: Analyzeamalgamationinthenatureofmergerand purchase and accounting treatment for internal reconstruction
CO4: Demonstratetheaccountingsystemsofabanking company under the guidance of RBI
CO5: HelptoprepareinsuranceaccountsasperIRDAI Guidelines

DIRECTTAX

CO1: ToexplainoverviewofTaxation in India.
CO2: ToevaluateIncomefrom salaries
CO3: TodetermineIncomefrom House Property
CO4: ToexamineProfits&gainsof Business or Profession.
CO5: ToestimateCapitalgains& Incomefromothersources

FORECASTING&PREDICTIVEANALYTICS

CO1: Understandtheregressionconcepts
CO2: Applydataclassificationtechniques
CO3: Demonstrateclusteringmechanism
CO4: Explaintheconceptsoflinearoptimization
CO5: Applydataanalyticaltechniquesonsampledatamodel

BUSINESSSTATISTICS–II

CO1: UnderstandtheinstallationofPOWERBI
CO2: ApplyknowledgeonBI tools
CO3: Demonstratevisualizationtechniques
CO4: ExplaintheintegrationofPOWERBIwithexcel
CO5: ApplyDAXTechniques

MARKETINGDATAANALYTICS

CO1: Understanding Social Media, the various channels throughwhichitoperatesanditsroleinmarketing strategy.

CO2: Useprinciplesofconsumerandsocialpsychologyto develop social media content and campaigns that engage consumers.
CO3: Drawknowledgeaboutwordofmouthmarketingto developeffectiveapproachesforpropagatingideas, messages, products across social media networks
CO4: Measuretheimpactofsocialmediacampaignsin terms of specific marketing objectives.
CO5: Tomakestudentsunderstandsearchengine optimization and online advertising.

VI SEMESTER

HUMANRESOURCEMANAGEMENT

CO1: UnderstandtheconceptofHRM,functionsand changing role of a HR manager
CO2: Distinguishbetweenthevariousmethodsofjobdesign and interpret the techniques of acquisition of human resources.
CO3: Explain the importance of HRP and point out the variousHRDapproachesforWorklifebalanceand describe the concept of the job.
CO4: AnalyzethecoreconceptsofHRD,TQMandunderstand the concept of career development.
CO5: Explainthevariousconceptsofworker'sparticipation and quality of work life.

ENTREPRENEURSHIPDEVELOPMENT

CO1: Understandthenatureandbasicconceptof entrepreneur and entrepreneurship
CO2: Demonstratetheknowledgeofentrepreneurship development programs,
CO3: Recognizetheneedforaprojectreportandanalyzethe concept of project formulation
CO4: Interpret the factory design and factory layout and identifytheimportanceofstandardizationandquality control.
CO5: Differentiatesmall-andlarge-scaleindustriesand identify the reasons for sickness of small-scale industries.

FINANCIALDECISIONMAKING

CO1: Examinethemarginalcostingtechniqueswidethe production and sales aspects.
CO2: Understandtheinfluenceofpriceonbehaviorof market demand and supply.
CO3: Demonstratetheroleofriskunderfinancing.
CO4: Understandtheimplicationofcapitalbudgeting.
CO5: Understandtheimportanceofvaluesandethicsin financial decision-making.

INTERNATIONALFINANCIALREPORTING-II

CO1: TomakethestudentsunderstandInternational Financial Reporting.
CO2: Tounderstandthestructureoftheframeworkof international accounting
CO3: TolearnDisclosurerequirementsforcompaniesinthe form of financial notes and reports.
CO4: TolearnDisclosurerequirementsforcompaniesinthe form of financial notes and reports.
CO5: Toprovideguidanceonhowtouse IFRSinpractice.

AUDITING&ACCOUNTINGSTANDARDS

CO1: TounderstandthebasicconceptsofAuditingandthe nature and scope of auditing.
CO2: Toorganizethevariousstepsinanauditingprocess and point out the techniques of vouching of cash payments and receipts.
CO3: Toanalyzethefeaturesandimportanceof Internal Control,Check and Audit
CO4: Topreparedifferenttypesofauditreportsandexplain the procedure for appointment and

removal of a company auditor
CO5: To understand the regulatory framework in which accountingstandardsareformulatedandoperated

CONSUMERBEHAVIOR

CO1: Statetheroleofconsumerandbehaviorallearning theories.
CO2: ExplaintheBrandLoyaltyrelatedConcepts
CO3: Interprettheresults,developments,modelsand attributes of attitudes.
CO4: AnalyzeReferencegroupsandtheirrelevance,social class and culture and social stratification.
CO5: DemonstratevariousConsumerBehaviorModelsand Consumer decision process model.

RESEARCHMETHODOLOGY

CO1: To understand and interpret the basic meaning of research,todefinetheresearchproblemathandand construct the procedure for undertaking research.
CO2: Toformulatehypothesisanddevelopanappropriate research design
CO3: Toclassifythedifferentsourcesofdataandanalyzethe various methods of data collection.
CO4: Todevelopthemostappropriatesamplesizeand design as well as determination of sampling and nonsampling errors.
CO5: Toclassifythevarioustypesofattitudemeasurement scalesandappliestheprinciplesandformatofreport writing and presentation.

B COM MARKETING COURSE

PROGRAMME OUTCOMES(BA/BSC/BCOM and BBA)Or POs :

PO1 Business and Management Knowledge: Apply the in depth knowledge acquired in the disciplines of Commerce, Business and Management, E-commerce, finance, accounting, auditing, marketing to solve complex problems in the business world.
PO2 Development of Business Solutions: Identify, formulate anddevelop solutions in different fields such asBanking, Insurance, and Finance. Core competencies can be gained to impart skills in Accounting, Management and Leadership, Communication and Overall Personality development.
PO3 Solving Research Problems and initiating Practical knowledge: utilize Research Methodology and Project work to infer and interpret data providing valid business conclusions and equip learners to grapple with modern day challenges in commerce and business.
PO4 Modern Business tools and Techniques: explain, select, analyze and apply relevant management techniques, resources, modern business tools, models and practices for holistic development of the learner.
PO5 The Manager, the businessman, the entrepreneur and the Society: Apply contextual and skill-based knowledge to identify the micro and macro factors which affect an organization.
PO6 Environment and Sustainability: Identify, analyze and equip learners to understand the need for creating business solutions for environmental and sustainable development.
PO7 Globalization and Ethics: Design and apply value based curriculum committed to professional ethics and responsibilities, so as to render global citizens with a human touch.

PO8 Lifelong learning and Employability: Recognize the need for and engage the learners to acquire proficiency, attain ability in management principles and practices equipping them to compete in competitive exams like C.A, ACCA, CS, CMA, ICWA and other courses making them self-reliant and highly employable.

BUSINESS ENGLISH – I

CO1: Students will be able to identify elements, forms and style of letters and will be able to create quotations related to inviting, sending and placing orders.
CO2: Students will be able to identify qualities and functions of a Sales Letter in order to enable them use the format of a Sales Letter.
CO3: To understand and write the functions, structure and types of Memorandum and design a notice, agenda and minutes.
CO4: To demonstrate the guidelines for answering and making effective telephone calls in order to enable understand and implement Note making.
CO5: To have a better understanding of scanning and proof-reading incomprehension.

INDIAN HERITAGE AND CULTURE

CO1: Understand better about the origin of ancient Indian culture and the contributions of great rulers from both north and south India for Indian culture in ancient days.
CO2: Indicate how Persian culture entered into India and its influence.
CO3: Express how Indian orthodox society turn into modern and western lifestyle in19th century.
CO4: Point out the various challenges faced by the youth of Indian society, the evils of terrorism and its impact on society.
CO5: Identify and express various gender issues like women rights and LGBT issues.

FUNDAMENTAL OF INFORMATION TECHNOLOGY

CO1: Understand basic computer terminology and number systems
CO2: Explain about operating systems, and its types.
CO3: Identify different applications of Information technology
CO4: Classify phases of Software Development Life Cycle
CO5: Compare modern means of communications, types of networks and topologies

Financial Accounting-I

CO1: Describe the need and importance of accounting.
CO2: Explain about subdivision of journal
CO3: Compare the cashbook and passbook balances to reconcile the difference.
CO4: Analyze the financial position of an organization
CO5: Identify the mistakes in books of accounts and helps in correcting them.

Introduction to Advertising& Media

CO1: Apply basic advertising theories and principles to practice
CO2: Identify arts knowledge with the principles of advertising in order to create effective

advertising campaigns
CO3: Analyze the expanding environment of Mass media and communication techniques.
CO4: Evaluate how current industry trends and issues impact the future of advertising
CO5: Develop creative solutions to address advertising and challenges.

Marketing Management

CO1: Explain the concept of marketing and sketches the marketing environment.
CO2: Classify the market and identifies the various market segments
CO3: Point out the marketing mix with reference to product and price
CO4: Analyze the promotion mix and the channels of distribution.
CO5: Explain service marketing mix and points out the importance of direct and online marketing.

BUSINESS ENGLISH – II

CO1: Students will be able to identify the elements of Claim and Adjustment letters.
Students will also be able to draft Claim letters and Adjustment letters.
CO2: They will be able to identify nature and types of credit letters.
Students will be able to recognize tone and style of Collection letters.
CO3: Students will comprehend the general guidelines to write Application letters and Resumes.
They will also be able to execute the form and content of an Application letter and Resume.
CO4: Students will also be able to understand characteristics and importance of Business Reports
They will also be able to prepare a good Business report
CO5: Students will be able to understand the techniques of describing Machines and Mechanisms. They will also be able to describe and create good Technical Reports.

VALUE EDUCATION & PERSONALITY DEVELOPMENT

CO1: Students will be able to differentiate Accepted norms and Counter values and be able to identify the various Dimensions of Human Development.
CO2: Students will be able to demonstrate Love and Experience of God and identify the Basic Issues of Life and Happiness as a life goal.
CO3: They will able to understand the importance of Concern for others and critique the various problems that deter the growth of society.
CO4: They will able to understand the importance of Concern for others and critique the various problems that deter the growth of society.
CO5: Students will be able to interpret the Purpose of Life and Goal Setting and demonstrate Self-management.

Statistics

CO1: Identify and interpret the various principles and importance of management
CO2: Explain and demonstrate the uses of planning and organizing
CO3: Classify and combine the various techniques of control and coordination.
CO4: Point out and develop the essence of motivation and direction to the students
CO5: Interrelate and understand the essence of leadership and the importance of communication

Financial Accounting-II

CO1: Introduce basic concepts of partnership and explains the admission of a partner.
CO2: Demonstrate accounting treatment relating to retirement and death of a partner.
CO3: Identify the rules applicable for winding up of partnership and insolvency of a partner.
CO4: Show the method of finding out profits and financial position by using incomplete records.
CO5: Illustrate method of preparing books under hire purchase and installment purchase system.

Print Advertising

CO1: Develop creative strategies for Print advertising
CO2: Plan and implement basic research and interpret research results as they apply to advertising campaigns
CO3: Analyze the expanding environment of Print media and communication techniques.
CO4: Apply digital intelligence across a broad range of business functions.
CO5: Select creative solutions to address Print advertising and challenges.

Business Organisation Management

CO1: Identify and interpret the various principles and importance of management
CO2: Explain and demonstrate the uses of planning and organizing
CO3: Classify and combine the various techniques of control and coordination.
CO4: Point out and develop the essence of motivation and direction to the students
CO5: Interrelate and understand the essence of leadership and the importance of communication

Environmental Studies

CO1: Understand the importance of Environmental education, conservation of natural resources & understand the importance of ecosystems and biodiversity
CO2: Understand the pollution problems and apply the environmental science knowledge on solid waste management, disaster management
CO3: Apply the environmental science knowledge to improve the resources
Evaluate and understand the sustainable environmental conditions and control methods
CO4: Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems
CO5: Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems

Visual Basic

CO1: Explain basic computer terminology and number systems.
CO2: Illustrate the concepts of data base management system.
CO3: Identifythe integrated development environment
CO4: Classify different types of control structures
CO5: Applymodern means of file handling methods

Advance Accounting

CO1: State various methods for preparing branch accounts.
CO2: Describe the allocation and interdepartmental transfer of expenses.
CO3: Analyze the financial position of non trading concerns.
CO4: Evaluate the different situation of capital issue to public issue of shares at par, premium and forfeiture.
CO5: Explain about sources of funds through issue of debentures and various methods of redemption.

Creativity in Advertising

CO1: Develop creative strategies for advertising
CO2: Create and conduct ethically sound and socially responsible advertising strategies and campaigns
CO3: Judge the strengths, weaknesses, opportunities and threats (SWOT) of different kinds of promotional campaigns.

CO4: Interpret the importance of market segmentation, position and action objectives to the development of an advertising

CO5: Analyze media strategy, scheduling, and vehicle selection.

Micro Economics

CO1: Demonstrate understanding of concepts of business economics
CO2: Apply different methods of demand forecasting based on time period and nature of product
CO3: Analyze different types of production function
CO4: Compare various market structures and analyze price-output decision in different markets
CO5: Analyze importance of international trade to Indian economy and evaluate effects of government policy on trade

E Commerce

CO1: Explain the basics of ecommerce applications
CO2: Categorize different types electronic payment systems
CO3: Develop the consumer oriented applications
CO4: Sub divides technology or services EDI and MIME
CO5: Create the consumer search and resource discovery

Marketing Research

CO1: To understand and interpret the basic meaning of Marketing Research, to define marketing research problems at hand & constructthe procedure for undertaking research.
CO2: To classify the different sources of data and analyze the various methods of data collection
CO3: Develop the most appropriate sample size and design as well as determine the sampling and non-sampling errors.
CO4: To classify the various types of attitude measurement scales and applies the principles and format of Report writing and representation.
CO5: To critically evaluate the application of Marketing Research in different marketing segments.

Applied Public Relations

CO1: Apply basic Public Relations theories and principles to practice.
CO2: Prepare effective presentations to work teams, clients, and publics.
CO3: Select broader liberal arts knowledge with the principles of Public Relations in order to create effective public relations campaigns.
CO4: Compose written Public Relations materials in a logical, coherent, concise, and appropriate format.
CO5: Create and conduct ethically sound and socially responsible Public Relations strategies and campaigns.

Business Law

CO1: Demonstrate an understanding of the legal environment of the business.
CO2: Explain legality of object and consideration, discharge of a contract and remedies available.
CO3: Identify the recognition of transactions involving the sales of goods act.
CO4: Dramatize the application of consumer protection act.
CO5: Recognize intellectual property rights and introduction to IT act 2000 and right to information act.

Corporate Accounting

CO1: Understand the various types of capital structures of the company and their representation in the balance sheet, preparation of financial statements with profits before incorporation.
CO2: Explain the valuation of shares and goodwill.
CO3: Analyze amalgamation in the nature of merger and purchase and accounting treatment for internal reconstruction.
CO4: Demonstrate the accounting systems of a banking company under the guidance of RBI.
CO5: Help to prepare insurance accounts as per IRDAI guidelines.

Radio Advertising

CO1: Develop creative strategies for Radio advertising
CO2: Plan and implement basic research and interpret research results as they apply to advertising campaigns
CO3: Analyze the expanding environment of Radio media and communication techniques.
CO4: Apply digital intelligence across a broad range of business functions.
CO5: Select media strategy, scheduling, and vehicle selection.

B COM MARKETING 3 YEARS 5TH SEMESTER

Sales Promotion

CO1: Determine the best organizational structure for its sales. Design a system to recruit, select, hire, and

assimilate effective sales people.

CO2: Design a system to train effective sales people. Design a plan to motivate, monitor, and

control the Sales Promotion.

CO3: Setting the budget for Sales Promotion, Potential and Limitations of Sale Promotion

CO4: Developing Sales Promotion programmes – Planning, Implementation Evaluation and making necessary modifications

CO5: Distinguish possible ethical/legal implications and assess management's responsibility to the customer, the salesperson, and the firm.

Taxation

CO1: To understand the basic definitions of Income Tax, Agricultural Income, Residential Status and Exempted Incomes.

CO2: To show the computation of income from the Head Salaries and House property as per IT act.

CO3: To identify the Income from Business, Profession and Capital Gains.

CO4: To compute Total Income of individuals and HUF

CO5: To assess the tax liability of Individuals and HUF as per IT act.

Personal selling & Salesmanship

CO1: Analyze the importance and Role of Personal Selling

CO2: Demonstrate Buying motives, Types of markets and implications for the selling function

CO3: Understand the Process of effective selling and merits and demerits of different sales presentation's

CO4: Imports the Selection and Training of Sales Persons and explain the Skills and qualities for successful sales person 1

CO5: Describe Distribution network , Reports and Documents, Daily report, Sales reports, Sales manual and Sales Bulletin

Internal Marketing and Export Management (IMEM)

CO1: To analyze the process of international marketing and classify India's export trade.

CO2: To describe the important factors of international marketing environment differentiate marketing research, market selection and market segmentation.

CO3: Analyze the importance of production and distribution strategies.

CO4: Differentiate the need for promotion mix strategies and pricing decisions

CO5: Explain foreign exchange strategies, differentiate balance of payments balance of trade and interpret international economic organizations.

Financial management

CO1: To interpret the concept of business finance, finance decision and functions of finance manager.

CO2: Able to understand the concept of cost of capital and leverages and calculate the cost of capital and leverages of a business concern

CO3: To interpret the concept of capital budget and will be able to apply the techniques of ARR, NPV,IRR,PI etc.

CO4: To understand the concept of working capital management and apply the concept and able to determine working capital requirement of a business organization.

CO5: To interpret the concept of cash management and cash budgeting and receivables management

Cost Accounting

CO1: Understand importance of cost accounting in organization

CO2: Describe the principles of managing inventories of materials and the procedures for accounting

inventory

CO3: Describe the principles and practice of costing labor to a business.

CO4: Describe the principles and process of overhead cost analysis.

CO5: To apply the operation of process costing methods

Electronic Media Advertising

CO1: Develop creative strategies for Electronic Media advertising

CO2: Plan and implement basic research and interpret research results as they apply to broadcast advertising campaigns

CO3: Analyze the expanding environment of Television media, Internet advertising and communication techniques.

CO4: Apply digital intelligence across a broad range of business functions.

CO5: Use digital tools to improve digital profitability and accessibility as well as the overall consumer experience.

AUDITING & ACCOUNTING STANDARDS

CO1: To understand the basic concepts of Auditing and the nature and scope of auditing

CO2: To organize the various steps in an auditing process and point out the techniques of vouching of cash payments and receipts

CO3: To analyze the features and importance of Internal Control, Check and Audit.

CO4: To prepare different types of audit reports and explain the procedure for appointment and removal of a company auditor.

CO5: To understand the regulatory framework in which accounting standards are formulated and operated.

Human Resource Management

CO1: Understand the concept of HRM, functions and changing role of a hr manager

CO2: Distinguish between the various methods of job design and interpret the techniques of acquisition of human resource.

CO3: Explain the importance of HRP and point out the various HRD approaches for Work life balance and describe the concept of job evaluation.

CO4: Analyze the core concepts of HRD,TQM and understand the concept of career development.

CO5: Explain the various concepts of worker's participation and quality of work life.

Management of Sales Force

CO1: Determine the best organizational structure for its sales force. Design a system to recruit, select, hire, and assimilate effective sales people.

CO2: Design a system to train effective salespeople. Design a plan to motivate, monitor, and control the sales force.

CO3: Select a compensation plan for the firm's sales force.

CO4: Estimate the market potential for each product; determine sales territories, quotas and forecast sales performance. Evaluate the performance of each member of a company's sales force.

CO5: Distinguish possible ethical/legal implications and assess management's responsibility to the customer, the salesperson, and the firm.

Consumer Behaviour

CO1: Understand the nature and basic concept of Consumer behaviour.
CO2: Explain the Brand Loyalty related Concepts.
CO3: Interpret the results, developments, models and attributes of attitudes.
CO4: Analyze Reference groups and their relevance, social class and culture and Social stratification.
CO5: Demonstrate various Consumer Behavior Models and Consumer decision process model.

ENTREPRENEURSHIP DEVELOPMENT

CO1: Understand the nature and basic concept of entrepreneur and entrepreneurship.
CO2: Demonstrate the knowledge of entrepreneurship development programmes
CO3: Recognise the need for project report and analyze the concepts of project formulation
CO4: Interpret factory design and factory layout and identify the importance of standardization and quality control
CO5: Differentiate small and large scale industries and identify the reasons for sickness of small scale industries

Financial Statement Analysis

CO1: To describe the role of management accounting information in managerial planning and decision making
CO2: To prepare and interpret the comparative and common size statements and ratio analysis
CO3: To analyze funds flow and to prepare the fund flow statement
CO4: To analyze cash flow and prepare cash flow statement
CO5: To develop an understanding of budgetary control methods.

Marketing Communications

CO1: Identify, and respond to clients' advertising and marketing communications objectives by applying principles of marketing and communications.
CO2: Evaluate the effectiveness of integrated advertising and marketing communications initiatives.
CO3: Perform a market segmentation analysis, determine the organization's target market/audience and define the consumer behaviour of each segment.
CO4: Plan, implement, monitor and evaluate projects by applying the principles of project management. Complete all work in a professional, ethical and timely manner.
CO5: Develop and execute creative marketing communications solutions within a branded advertising approach.

BACHELOR OF BUSINESS ADMINISTRATION

PROGRAMME SPECIFIC OUTCOMES (DEPARTMENTAL):

Students will be able to:

PSO1. Understand the importance of teamwork and group dynamics in achieving

organizational goals and demonstrate ability to work effectively as a team.

PSO2.Analyze the dynamics of the organizational conflict, various leadership styles and their execution.

PSO3. Think **critically** of diverse global perspectives and challenges of global business.

PSO4. Apply the knowledge of entrepreneurship, finance, marketing, HR, and computer-based information systems to business operations.

BUSINESS ENGLISH - I

CO1: Students will be able to identify elements, forms and style of letters and will be able to create quotations related to inviting, sending and placing orders.
CO2: Students will be able to identify qualities and functions of a Sales Letter in order to enable them use the format of a Sales Letter.
CO3: To understand and write the functions, structure and types of Memorandum and design a notice, agenda and minutes.
CO4: To demonstrate the guidelines for answering and making effective telephone calls in order to enable understand and implement Note making.
CO5: To have a better understanding of scanning and proof reading incomprehension.

INDIAN HERITAGE & CULTURE

CO1: The student can understand better about the origin of ancient Indian culture and the contributions of great rulers from both north and south India for Indian culture in ancient days
CO2: Students will analyse how Persian culture entered into India and how it influenced the Fine Arts of Indian society like Classical Music, Dance and Architecture.
CO3: Student can able to assess how the Indian orthodox society turn into modern and western society in the 19th century .It also edifies the students with spiritual doctrines of various Religions.
CO4: Students will evaluate various challenges face by the youth and the evil affects of terrorism on society

CO5: Students will evaluate various challenges face by the youth and the evil affects of terrorism on society

FUNDAMENTALS OF INFORMATION TECHNOLOGY

CO1: To understand basic computer terminology and number systems.

CO2: To identify different operating systems, and its types.
CO3: Classify different applications of Information technology
CO4: Analyse the importance of system development and the phases of SDLC
CO5: Categorize modern means of communications, types of networks and topologies

BANKING THEORY AND PRACTICE

CO1: To **identify** and illustrate the origin and growth of banking in India.

CO2: To **demonstrate** and apply the steps involved in opening a bank account

CO3: To **appraise** and criticize the various types of collateral securities and point out the precautions to be taken by a banker while advancing loans against different types of securities

CO4: To**demonstrate** the organizational structure and functions of Co-operative banks, NABARD and RBI.

CO5: To **interpret** the features of various types of negotiable instruments

FINANCIAL ACCOUNTING-1

CO1:Describe the need and importance of accounting
CO2: Explain about subdivision of journal

CO3: Compare the cashbook and passbook balances to reconcile the difference
CO4: Analyze the financial position of an organization
CO5:Identify the mistakes in books of accounts and helps in correcting them

PRINCIPLES OF MANAGEMENT

CO1: Identify and interpret the various principles and importance of management
CO2: Explain and demonstrate the uses of planning and organizing
CO3: Classify and combine the various techniques of control and coordination.
CO4: Identify the essence of motivation and direction
CO5: Interrelate and understand the essence of leadership and the importance of communication

BUSINESS ENGLISH - II

CO1: Students will be able to identify elements, forms and style of letters and will be able to create quotations related to inviting, sending and placing orders.

CO2: Students will be able to identify qualities and functions of a Sales Letter in order to enable them use the format of a Sales Letter.

CO3: To understand and write the functions, structure and types of Memorandum and design a notice, agenda and minutes

CO4: To demonstrate the guidelines for answering and making effective telephone calls in order to enable understand and implement Note making
CO5: To have a better understanding of scanning and proof reading incomprehension

VALUE EDUCATION

CO1: Students will be able to identify Accepted norms and Counter values. They will be able to differentiate the various Dimensions of Human Development.

CO2: Students will be able to demonstrate Love and Experience of God. They will be able to identify the Basic Issues of Life and Happiness as a life goal
CO3: They will able to understand the importance of Concern for others. They will able to critique the various problems that deter the growth of the society
CO4: The students will be able to recognize the traits of a good personality. They will be able identify their personality by Self-Exploration

CO5: Students will be able to interpret the Purpose of Life and Goal Setting. They will be able to learn SelfManagement

FUNDAMENTALS OF BUSINESS STATISTICS

CO1: Organize, manage and present data. Can represent the statistical data in diagrammatic and graphical form
CO2: Calculate measures of central tendency.

CO3: Analyze the data using measures of dispersion
CO4: Evaluate the nature for the statistical data using skewness and moments.
CO5: Determine the relation between any two factors using the concepts of correlation and regression analysis

CORPORATE GOVERNANCE & BUSINESS ETHICS

CO1: Identify and explain the importance of values and ethics

CO2: Analyze and interpret the various theories of ethical value system.

CO3: Point out the relationship between law and ethics and understand the impact of law on the business

CO4: Explain the corporate governance codes, transparency and disclosure in the corporate
CO5: Identify and point out the global issues of governance.

FINANCIAL ACCOUNTING-II

CO1:Explain the basic concepts of partnership and explains the admission of a partner
CO2: Demonstrate the accounting treatment relating to retirement and death of a partner

CO3: Identify the rules applicable for winding up of partnership and insolvency of a partner
CO4: Show the method of finding out profits and financial position by using incomplete records

CO5:Illustrate method of preparing books under hire purchase and instalment purchase system

MANAGERIAL ECONOMICS

CO1: Understand the basic terms and concepts used in the managerial economics
CO2: Appraise the behaviour of consumers through the demand and indifference analysis

CO3: Interpret the behaviour of producer through supply, production and other related concepts.
CO4: Differentiate the market forms and the price and output determination under each type of market.

CO5: Infer the impact of the macro economic factors on the business concerns.

TAXATION

CO1: To understand the basic definition of Income tax . Agriculture income, Residential Status and exempted income.

CO2: To show the computation of income from Head Salaries and house property as per IT Ac.

CO3: To identify the income from business- Profession and Capital Gains.
CO4: To compute Total Income of individual and HUF.

CO5: To assess the tax liability of Individual and HUF A as per IT Act

FUNDAMENTALS OF BUSINESS MATHEMATICS

CO1: Use the quadratic formula to find all real solutions. Compute the Discriminant and state the number and type of solutions

CO2: Perform standard operations with matrices including addition, scalar multiplication, and multiplication.

Compute the inverse of a matrix.

CO3: Understand particular types of sequences called arithmetic progression, geometric progression and also find arithmetic mean (A.M), geometric mean (G.M) between two given numbers.

CO4: Understand the idea of differentiation from first principles - differentiate power functions.

CO5: Learn about integration and about some of the common techniques employed to obtain integrals. Interpret distinction between a definite and an indefinite integral.

RESEARCH METHODOLOGY

CO1: Understand and interpret the basic meaning of research, to define the research problem at hand and construct the procedure for undertaking research.

CO2: Formulate hypothesis and develop an appropriate research design.

CO3: Classify the different sources of data and analyze the various methods of data collection.

CO4: Develop the most appropriate sample size and design as well as determination of sampling and non sampling errors

CO5: Classify the various types of attitude measurement scales and applies the principles and format of report writing and presentation.

ADVANCED ACCOUNTING

CO1: State various methods for preparing branch accounts.

CO2: Describe the allocation and interdepartmental transfer of expenses.

CO3: Analyse the financial position of non trading concerns.

CO4: Evaluate the different situation of capital issue to public issue of shares at par, premium and forfeiture

CO5: Explain about sources of funds through issue of debentures and various methods of redemption.

MACRO BUSINESS ENVIRONMENT

CO1: To define and explain the process of calculating national income

CO2: To define and explain the process of calculating national income

CO3: To illustrate meaning of inflation and identify different kinds of inflation, causes and effects of inflation on different sectors of economy

CO4: To appraise the importance of planning undertaken by government of India and economic reforms adopted by economy.

CO5: To develop understanding towards role of foreign investment in development of Indian industries

SEM-IV

Environmental Studies and Gender Sensitization

CO1:Understandthe importance of Environmental education, conservation of natural resources & Understand the importance of ecosystems and biodiversity

CO2:Understand the pollution problems and Apply the environmental science knowledge on solid waste management, disaster management

CO3:Apply the environmental science knowledge to Improve the resources and Evaluate and understand the sustainable environmental conditions and control methods

CO4:Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time. And their problems

CO5:Understand the gender problems and ways of addressing them, including interactions across local to global scales in communities and overcome inequalities with legislations

HUMAN RESOURCE MANAGEMENT

CO1: Understand the concept of HRM, functions and changing role of a hr manager

CO2: Distinguish between the various methods of job design and interpret the techniques of acquisition of human resource

CO3: Explain the importance of HRP and point out the various HRD approaches for Work life balance and describe the concept of job evaluation.

CO4: Analyse the core concepts of HRD, TQM and understand the concept of career development.

CO5: Explain the various concepts of worker's participation and quality of work life

E-COMMERCE

CO1: Explain electronic commerce framework and WWW architecture

CO2: Select mercantile process models and types of electronic payment systems.

CO3: Apply EDI implementations and analyze intra organizational electronic commerce

CO4: Design corporate digital library, advertising and marketing on the internet

CO5: Identify consumer search and resource discovery, on demand education and digital copy rights

CORPORATE ACCOUNTING

CO1: Understand the various types of capital structures of the company and their representation in the balance sheet, preparation of financial statements with profits before incorporation.

CO2: Explain the valuation of shares and goodwill.

CO3: Analyse amalgamation in the nature of merger and purchase and accounting treatment for internal reconstruction.

CO4: Demonstrate the accounting systems of a banking company under the guidance of RBI.

CO5: Analyze insurance accounts as per IRDAI guidelines.

FINANCIAL MANAGEMENT

CO1: Interpret the concept of business finance, finance decision and functions of finance manager.

CO2: Understand the concept of cost of capital and leverages and calculate the cost of capital and leverages of a business concern.
CO3: Interpret the concept of capital budget and will be able to apply the techniques of ARR, NPV,IRR,PI etc.
CO4: Understand the concept of working capital management and apply the concept and able to determine working capital requirement of a business organization.

CO5: Interpret the concept of cash management and cash budgeting and receivable management.

MARKETING MANAGEMENT

CO1: Explain the concept of marketing and sketches the marketing environment
CO2: Classify the market and identify the various market segments.
CO3: Point out the marketing mix with reference to product and price
CO4: Analyze the promotion mix and the channels of distribution.
CO5: Explain service marketing mix and points out the importance of direct and online marketing

SEM- V

INTERNATIONAL MARKETING & EXPORT MANAGEMENT

CO1: Analyze the process of international markets and classify India's export trade

CO2: Describe the important factors of international marketing environment and differentiate marketing research, market selection, and market segmentation

CO3: Analyze the importance of product and distribution strategies

CO4: Differentiate the need for promotion mix strategies and pricing decisions
CO5: Explain foreign exchange strategies, differentiate balance of payments and balance of trade, and interpret international economic organizations

INTERNATIONAL BUSINESS

CO1: Explain the overview of international business and demonstrate the environment of international business.

CO2: Explain about the various forms of trade regulation and integration.

CO3: Sketch the various modes of entering the international market.

CO4: Point out the conceptual framework of e-business and policy framework for global e-business.

CO5: Analyze the intercultural communication on the global perspective

LEADERSHIP & CHANGE MANAGEMENT

CO1: Recognize the qualities of a leader, analyze various leadership theories and illustrate the different leadership styles
CO2: Analyze the forces of change and interpret the techniques of change management.
CO3: Classify the various types of organizational change.
CO4: Point out the reasons for resistance to organizational change and recognize the methods of overcoming resistance.
CO5: Develop the most suitable plan for successful implementation and organization of change in an organization

TALENT & KNOWLEDGE MANAGEMENT

CO1: Explain the basic concepts of talent management
CO2: Identify the importance of recruitment, coaching, training and development

CO3: Points out the importance of knowledge management

CO4: Explains the relationship between Virtual Organization and HRM

CO5: Explains the need for learning organization

OPERATIONS RESEARCH

CO1: Understand the characteristics of different types of decision-making environments and the appropriate decision making approaches and tools to be used in each type.

CO2: Build and solve Transportation Models. Analyze the cases of unequal supply and demand, unacceptable routes, and maximization objective for a transportation problem.

CO3: Understand the mathematical tools that are needed to solve optimization problems, and be familiar with the special features of the trans-shipment problem
CO4: Design new simple models, like: CPM, PERT to improve decision –making and develop critical thinking and objective analysis of decision problems

CO5: Understand the terminology & amp; nomenclature appropriate queueing theory, and demonstrate the knowledge of various queueing models.

COST ACCOUNTING

CO1: Understand importance of cost accounting in organization.

CO2: Apply the principles of managing inventories of materials and the procedures for accounting inventory
CO3: Apply the principles and practice of costing labour to a business.

CO4: Apply the principles and process of overhead cost analysis.

CO5: Apply the operation of unit or output costing and process costing methods.

BUSINESS LAW

CO1: Demonstrate an understanding of the legal environment of the business.

CO2:Explain legality of object and consideration, discharge of a contract and remedies available.

CO3: Identify the recognition of transactions involving the sales of goods Act.

CO4: Dramatise the application of consumer protection act.

CO5: Recognize intellectual property rights and introduction to IT act 2000 and right to information act.

STRATEGIC MANAGEMENT

CO1: Explain the strategic management process and craft strategies.

CO2: Analyse the components of environment analysis in depth.
CO3: Formulate the various corporate strategies.
CO4: Plan and produce strategies tailoring to fit specific industry
CO5: Explain the various issues and importance of strategic leadership.

FINANCIAL MARKETS & INSTITUTIONS

CO1: Explain and analyze the various functions and importance of Indian financial system

CO2: Classify capital markets and assess the rational content and current reforms to capital market regulations

CO3: Analyze the features of money market and list out the various money market instruments

CO4: Identify and interpret the various services provided by a merchant banker

CO5: Explain the meaning, origin, and types of funds

FUNDAMENTALS OF INVESTMENT MANAGEMENT

CO1: Explain investment decisions considering risk factors and returns.

CO2: Analyze investment decisions to understand viability of projects.

CO3: Analyze fixed and variable income securities.

CO4: Evaluate the role of SEBI and NSDL in portfolio management.

CO5: Explain the importance of mutual funds in capital market.

RETAIL MARKETING & CUSTOMER RELATIONSHIP MANAGEMENT

CO1: Understand the important concepts of retailing

CO2: Sketch the importance of merchandise management and phases in merchandise planning.

CO3: Explain the concept of human resource management in retailing

CO4: Explain and understand the approaches to develop customer service.

CO5: Analyse the various steps involved in CRM process.

CONSUMER BEHAVIOUR

CO1: Analyse the various learning theories and interpret the role of reinforcement

CO2:sketch the importance of perceptual mapping and understand the cognitive process.

CO3: Sketch the importance of perceptual mapping and understand the cognitive process.

CO4: Explain and understand the group conformity, social class and culture.
CO5: Analyse the various consumer behaviour models.

ENTREPRENEURSHIP DEVELOPMENT

CO1: Understand the nature and basic concepts of Entrepreneur and Entrepreneurship

CO2: Demonstrate the knowledge of entrepreneurship development programmes

CO3: Recognize the need for project report and analyze the concepts of project formulation

CO4: Interpret factory design and factory layout and identify the importance of standardization and quality control.

CO5: Differentiate small and large scale industries and identify the reasons for sickness of small scale industries.

MANAGEMENT ACCOUNTING

CO1: Explain an overview of management accounting, its need, scope and functions.

CO2: Prepare the financial statements and show its analysis and interpretation and apply different formula in ratio analysis

CO3: Illustrate the preparation of funds flow statement and cash flow statement.

CO4: Explain marginal costing and budgetary techniques

CO5: Understand importance of standard costing and analyze variance analysis

COMPANY LAW

CO1: Develop basic knowledge of provisions of companies act 2013.

CO2: Describe the capital structure of company through issues of shares and alteration of share capital.

CO3: Explain the borrowing powers of a company and consequences of ultra vires borrowing

CO4: State various provisions of the companies act relating to company management and meetings.

CO5: Identify various modes of winding up and legal provisions applicable

BSCCOMPUTERSCIENCE&INTERNETOFTHINGS

NCSIOT

ENVIRONMENTAL STUDIES & GENDER SENSITIZATION

CO1: Understand the importance of Environmental education, conservation of natural resources & understand the importance of ecosystems and biodiversity

CO2: Understand the pollution problems and apply the environmental science knowledge on solid waste management, disaster management.

CO3: Apply the environmental science knowledge to improve the resources and Evaluate and understand the sustainable environmental conditions and control methods

CO4: Identify the interactions and intersections of identities (e.g., gender, race, ethnicity, class, sexuality, and so on) and assess the ways in which they contribute to instances of privilege and power dynamics across cultures, space, and time and their problems.
CO4: Understand the gender problems and ways of addressing them, including interactions across local to global scales in communities and overcome inequalities with legislations

INTRODUCTION TO IOT USING ARDUINO

CO1:OUTCOME: Developing a working model using arduino technology.

DISCRETE MATHEMATICS

CO1: Develop an understanding of Logic Sets and Functions
CO2: Evaluate and apply the fundamental concepts in graph theory
CO3: Develop an understanding of how graph and tree concepts are used to solve problems arising in computer science.
CO4: Express the concepts and results of Euler and Hamiltonian graphs
CO5: Identify methods and techniques used to represent flow through a network.

ADVANCED MICROPROCESSORS

CO1: Understand **the necessity, features and architecture of 8086.**

CO2: Analyze **the addressing modes and understand the functions of 8086 instructions**

CO3: Write **simple assembly language programs.**

CO4: Understand **the need and handling of interrupts in 8086 and features of peripheral ICs.**

CO5: Explain **the architecture of generic advanced microprocessor and features of advanced microprocessors.**

COMPUTER ORGANIZATION AND ARCHITECTURE

CO1: To design the arithmetic and logical unit.
CO2: To implement different types of control and the concept of I/O and pipelining Techniques
CO3: To Understand appropriate computer systems for given application domains for future design of computer architecture.
CO4: To Understand and develop processor for future computing hardwires to solves the problems of high end computing applications
CO5: To design new computer architecture of their own so that it could be solve the computer stakeholder problems in future.

PYTHON PROGRAMMING

CO1: Explain the basics of Python Programming constructs**.**

CO2: Sub divides larger problems into smaller ones using functions
CO3: Apply various data structures for problem solving
CO4: Apply object-oriented programming features for solving a given problem
CO5: Select an appropriate exception handling depending on application and design file operations using Python standard library

PROBABILITY AND STATISTICS

CO1: Calculate the mean, median, and mode of a set of data and identify the importance of measures of dispersion**.**
CO2: Use discrete and continuous probability distributions, including requirements and making decisions.
CO3: Employee the principles of linear regression and correlation, including least square method, predicting a particular value of Y for a given value of X and significance of the correlation coefficient
CO4: Knowledge about formulating and testing a hypothesis, using critical values to draw conclusions and determining probability of making errors in hypothesis tests, and about large sample tests**.**
CO5: Understand and analyze various methods of small sample tests.

SMART SENSOR TECHNOLOGIES

CO1: To analyzethe working of various types of sensors.
CO2: Identify different issues observed in the applications of sensors.
CO3: Identify the security threads in sensor networks**.**
CO4: Gained knowledge about the sensor protocols.

ADVANCED MICRO-CONTROLLER BASED SYSTEM

CO1: Understand the block diagram of 8051, Memory organization, counters and interrupt structure in 8051.
CO2: Develop the assembly language programs for 8051 based microcontroller
CO3: Develop the interfacing circuits for 8051 based microcontroller
CO4: Develop the interfacing circuits for 8051 based microcontroller

FUNDAMENTALS OF IOT AND ROBOTICS

CO1: Students will be Understand fundamentals of IoT**.**
CO2: Students will be able to classify and familiarized with broad range of topics in robotics with emphasis on basics of manipulators, coordinate transformation and kinematics
CO3: Students will be able understand the concepts of actuators and their implementation.
CO4: Students will be able to learntypes of sensors and they can apply in real-time.
CO5: Students will be able to demonstrate with trajectory planning and Robotic control techniques

EMBEDDED SYSTEM DESIGN AND PROGRAMMING

CO1: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming**.**
CO2: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming**.**
CO3: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming.
CO4: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming.
CO5: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming.

PROGRAMMING WITH RASPBERRY PI

CO1: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming
CO2: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming
CO3: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming
CO4: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming
CO5: The goal of the course is to familiarize the students with the fundamental concepts of Embedded systems, Design and Development and programming

B.COMBUSINESSANALYTICS

PROGRAMME SPECIFICOUTCOMES(DEPARTMENTAL):

PSO1. Hands-on learning of leading analytics tools.

PSO2. To acquire theoretical knowledge of data science tools, but will also gain exposure to business perspectives.

PSO3. The Career opportunities after completion of B.Com (BA) degree are Business Analyst, Quantitative Analyst, Operations Research Analyst and Market research Analyst

PSO4. Prospective career opportunities and growth in the field of big data analytics.

PSO5. Learningtrendingprogramminglanguagesforcareeradvancements

BUSINESSENGLISH-ICOURSE

CO1: Students will be able to identify elements forms and style of letters and will be able to create quotations related to inviting, sending and placing orders.
CO2: Students will be able to identify qualities and functions of a Sales Letter in order to enable them to use the format of a Sales Letter.
CO3: To understand and write the functions, structure and types of Memorandum and design a notice, agenda and minutes.
CO4: To demonstrate the guidelines for answering and making effective telephone calls in order to enable understanding and implement Note making.
CO5: To have a better understanding of scanning and proofreading incomprehension.

INDIANHERITAGE&CULTURE

CO1: The student can understand better about the origin of ancient Indian culture and the contributions of great
rulers from both north and south India for Indian culture in ancient days
CO2: Students will analyze how Persian culture entered into India and how it influenced the Fine Arts of Indian society like Classical Music, Dance and Architecture.
CO3: Students are able to assess how the Indian orthodox society turned into modern and western society in the 19th century. It also edifies the students with spiritual doctrines of various religions.

CO4: Students will evaluate various challenges face by the youth and the evil effects of terrorism on society
CO5: The topics in the unit create belongingness among the students by bringing awareness of the rights and duties to make the world a better place and it throws light on gender sensitization issues of women, Children and LGBT.

BUSINESSORGANIZATIONANDMANAGEMENT

CO1: Identify and interpret the various principles and importance of management
CO2: Explain and demonstrate the uses of planning and organizing
CO3: Classify and combine the various techniques of control and coordination
CO4: Point out and develop the essence of motivation and direction to the students
CO5: Interrelate and understand the essence of leadership and the importance of communication

DATA-DRIVENDECISIONMAKING

CO1: To Identify and illustrate the Business Analytics Principles and prerequisites

CO2: To demonstrate and apply the steps involved in Business Analytics ecosystem
CO3: To Understand the Data Life Cycle Management and identify gathering process and analyze why requirement gathering process
CO4: To appropriate the various type of Requirements gathering process and analyze why requirement gathering process
CO5: To interpret how the requirement gathering fits with the development of a customer journey map

FUNDAMENTALSOFINFORMATIONTECHNOLOGY

CO1: Describe the need and importance of accounting
CO2: Explain about subdivision of journal
CO3: Compare the cash book and passbook balance store council the difference
CO4: Analyze the financial position of an organization
CO5: Identify the mistakes in books of accounts and helps in correcting them

FINANCIALACCOUNTING-I

CO1: Describe the need and importance of accounting
CO2: Explain about subdivision of journal

DATAANALYTICSMODELING

CO1: Understand the importance of Analytics in Business
CO2: Apply Data Cleaning Techniques on raw data
CO3: Demonstrate ETL Process
CO4: Explain the concept of Data Warehousing
CO5: Understand the various forms of Data

FUNDAMENTALSOFBUSINESSANALYTICS

CO1: Understand basic concept to R
CO2: Demonstrate programming concept and data structure in R
CO3: Analyze large problem by subdividing it into smaller components using functions
CO4: Choose an appropriate graphic for analysis and analyze data using summary
CO5: Choose the type of regression based on the data set.

ADVANCEDACCOUNTING

CO1: State various methods for preparing branch accounts
CO2: Describe the allocation in dinter departmental transfer of expenses
CO3: Analyze the financial position of non-trading concern
CO4: Evaluate the different Situation of capital issue to public issue of shares at par ,premium and for future
CO5: Explain about source of funds through issue of debentures and various methods of

redemption

DIGITALMARKETING

CO1: The aim of digital Marketing course is to provide students with the knowledge about business advantages of the digital marketing and its importance for making success ; to develop a digital marketing plan
CO2: How to manage customer relationship across all digitals channels and build better customer relationships, to create a digital marketing plan
CO3: How to integrate different digital media and create marketing content: how to SEO optimization
CO4: Differentiate the digital marketing strategies among different digital and social media platforms
CO5: Analyzing consumer behavior and developing segmentation targeting and positioning strategies

BUSINESSSTATISTICS-I

CO1: Understand merits and limitations of statistical data and types of collection of data. Represent statistical data in the form of diagrams and graphs.
CO2: Understand the relation between variables and predict the data.
CO3: Understand the various types of trends.
CO4: Studentswouldbeabletocalculatemeanandproportionsandcanmakeimportantdecisionsfrom a few samples which are taken out of unmanageably huge populations
CO5: StudentwouldbeabletocalculateANOVAbyonewayandtwo-wayclassification

MARKETINGMANAGEMENT

CO1: Explain the concept of marketing and sketches the marketing environment
CO2: Classify the market and identifies the various market segments
CO3: Point out the marketing mix with reference to product and price
CO4: Analyze the promotion mix and the channel so fdistribution
CO5: Explainservicemarketingmixandpointsouttheimportanceofdirectandonlinemarketing

INTERNATIONALBUSINESS

CO1: To know overview–International business
CO2: To demonstrate Global Business,GATT and TRIPs and TRIMS-WTO and India-UNCTAD
CO3: To explain Global Marketentry Strategies and Ownership Strategies
CO4: TounderstandtheConceptualframeworkofE-Business,E-businessTechnologyandEnvironment
CO5: To analyze the Managing Global Business and Intercultural Human Resources Management in Global Context

CORPORATEGOVERNANCEANDBUSINESSETHICS

CO1: To identify and explain the importance of values and ethics

CO2: To analyze and interpret the various theories of ethical value system
CO3: To point out the relationship between law and ethics and understand the impact of law on business
CO4: To explain the various corporate governance codes ,transparency and disclosure in the corporate
CO5: To identify and point out the global issues of governance

FINANCIALDECISIONMAKING–I

CO1: To identify relevant financial data used in making business decisions
CO2: Examine the financial accounting elements to be considered when making a decision that impacts and entity's financial position
CO3: Understand the financial market structure and its impact on the financial structure of a company
CO4: To demonstrate the techniques of working capital management
CO5: To appraise mergers and acquisitions for restructuring of corporation

ADVANCEDDATAVISUALIZATION

CO1: Students will be able to demonstrate skills to use modern computing paradigms and computing platforms on data
CO2: To familiarize the students with fundamental concepts of data visualization
CO3: Students will earn and understand the basic tools used for visualizing data
CO4: To use modern computing paradigms and computing platforms
CO5: To familiarize students with fundamentals concepts of data visualization

INTERNATIONALFINANCIALREPORTING-I

CO1: To critically analyze the international accounting standards and their implication in the financial statements
CO2: To understand the structure of the frame work of international accounting
CO3: To learn disclosure requirements for companies in the form of financial notes and reports
CO4: To examine the fundamental requirements of IFRS on a standard-by-standard basis
CO5: To provide guidance on how to use IFRS in practice

FINANCIALPLANNINGANDPERFORMANCE

CO1: Understand the nuances in the strategic planning process
CO2: Learn the techniques of drafting all kinds budgets and the role in financial goalsetting
CO3: Examine the importance and application of crucial cost controlling methodologies
CO4: Demonstrate the various performance measures and its implication on company's profitability
CO5: Understand computerized techniques to analyze the financial performance

INTERNATIONALMARKETINGANDEXPORTMANAGEMENT

CO1: To analyze the process of international marketing and classify
CO2: To Describe the important factors of the international marketing environment, differentiate marketing research, market selection and market segmentation.
CO3: Analyzetheimportanceofproductionanddistributionstrategies.
CO4: Differentiatetheneedforpromotionmixstrategiesandpricingdecisions
CO5: Explainforeignexchangestrategies,differentiatebalanceofpayments,balanceoftradeand interpret international economic organizations.

BUSINESSENGLISH-II

CO1: Students will be able to identify the elements of the claim and adjustment letter. Students will also be able to draft claim letters and adjustment letters.
CO2: They will be able to identify the nature and types of credit letters .Students will be able to recognize the tone and style of the collection letter.
CO3: Students will comprehend the general guidelines to write application letter and resume, they will also be able to execute the form and content of the application letter and resume.
CO4: Students will also be able to understand characteristics and importance of business letters. They will also be able to prepare a good business report.
CO5: Students will be able to understand the techniques of describing machines and mechanisms. They will also be able to describe and create good technical reports.

VALUEEDUCATIONANDPERSONALITYDEVELOPMENT

CO1: Identify accepted norms and counter values& differentiate the various dimensions of human development
CO2: Demonstrate love and experience of god along with identifying the basic issues of life and happiness as life goals.
CO3: Understand the importance of concern for others and criticize the various problems that deter the growth of society
CO4: Recognize the traits of good personality and identify their personality by self exploration
CO5: Interpret the purpose of life and goal settings and learn self management

FUNDAMENTALSOFBUSINESSMATHEMATICS

CO1: To solve linear equations
CO2: To get solutions of real life problems by using logarithms and set theory
CO3: To solve the problems in business line like banking sector
CO4: To get maximum profits and minimum loss in company productivity
CO5: To measure and areas and volumes

MANAGERIALECONOMICS

CO1: Understand the basic terms and concepts used in managerial economics
CO2: Appraise the behavior of consumer through the demand and indifference analysis
CO3: Interpret the behavior of producer through supply and production and other related concepts

CO4: Differentiate the market forms and the price and output determinations under each type of market
CO5: Infer the impacts of macro economics factors on the business concerns

DATAANALYTICSESSENTIAL

CO1: Tounderstandthevariablesfordataanalytics.
CO2: To calculate measures of central tendency.
CO3: Analyze the probability for Data Analytics
CO4: Evaluate the nature for the statistical data using distributions
CO5: Understanding the concepts of statistics in R case and apply vectors in R

FINANCIALACCOUNTINGII

CO1: Introducestothebasicconceptsofpartnership and explains the admission of a partner
CO2: Demonstratestheaccountingtreatmentrelatingto retirement and death of a partner
CO3: Identifiestherulesapplicableforwindingupof partnership and insolvency of a partner
CO4: Shows the method of finding out profits and financialpositionbyusingincompleterecords
CO5: IllustratesmethodofpreparingbooksunderHire purchase and installment purchase system.

ENVIRONMENTALSTUDIES&GENDERSENSITIZATION

CO1: Tounderstandtheimportanceofecological balance for sustainable development
CO2: Tounderstandtheimpactsofdevelopment activities and mitigation measures.
CO3: ToUnderstandtheenvironmentalpoliciesand regulations
CO4: Toprovideaperspectiveonthe socializationof men and women
CO5: Toexposethestudentstodebateonthepolicies and economic works and on gender

CORPORATEACCOUNTING

CO1: Understand the various types of capital structures of the company and their representation in the balance sheet,preparationoffinancialstatementswithprofits before incorporation.
CO2: Explainthevaluationofsharesandgoodwill
CO3: Analyzeamalgamationinthenatureofmergerand purchase and accounting treatment for internal reconstruction
CO4: Demonstratetheaccountingsystemsofabanking company under the guidance of RBI
CO5: Help to prepare insurance accounts as per IRDAI Guidelines

DIRECTTAX

CO1: ToexplainoverviewofTaxation in India
CO2: ToevaluateIncomefrom salaries
CO3: TodetermineIncomefrom House Property
CO4: ToexamineProfits&gainsof Business or Profession
CO5: ToestimateCapitalgains& Incomefromothersources

FORECASTING&PREDICTIVEANALYTICS

CO1: Understandtheregressionconcepts
CO2: Applydataclassificationtechniques
CO3: Demonstrateclusteringmechanism
CO4: Explaintheconceptsoflinearoptimization
CO5: Applydataanalyticaltechniques onsampledatamodel

BUSINESSSTATISTICS-II

CO1: UnderstandtheinstallationofPOWERBI
CO2: ApplyknowledgeonBI tools
CO3: Demonstratevisualizationtechniques
CO4: ExplaintheintegrationofPOWERBIwithexcel
CO5: ApplyDAXTechniques

MARKETINGDATAANALYTICS

CO1: Understanding Social Media, the various channels throughwhichitoperatesanditsroleinmarketing strategy
CO2: Useprinciplesofconsumerandsocialpsychologyto develop social media content and campaigns that engage consumers
CO3: Drawknowledgeaboutwordofmouthmarketingto developeffectiveapproachesforpropagatingideas, messages, products across social media networks.
CO4: Measuretheimpactofsocialmediacampaignsin terms of specific marketing objectives
CO5: Tomakestudentsunderstandsearchengine optimization and online advertising

HUMANRESOURCEMANAGEMENT

CO1: UnderstandtheconceptofHRM,functionsand changing role of a HR manager
CO2: Distinguishbetweenthevariousmethodsofjobdesign and interpret the techniques of acquisition of human resources
CO3: Explain the importance of HRP and point out the variousHRDapproachesforWorklifebalanceand describe the concept of the job.
CO4: Analyze ThecoreconceptsofHRD,TQMandunderstand the concept of career development.
CO5: Explainthevariousconceptsofworker'sparticipation and quality of work life.

ENTREPRENEURSHIPDEVELOPMENT

CO1: Understandthenatureandbasicconceptof entrepreneur and entrepreneurship
CO2: Demonstratetheknowledgeofentrepreneurship development programs.
CO3: Recognizetheneedforaprojectreportandanalyzethe concept of project formulation
CO4: Interpret the factory design and factory layout and identify the importance of standardization and quality control

CO5: Differentiate small-and large-scale industries and identify the reasons for sickness of small-scale industries.

FINANCIALDECISIONMAKING

CO1: Examinethemarginalcostingtechniqueswidethe production and sales aspects.
CO2: Understandtheinfluenceofpriceonbehaviorof market demand and supply
CO3: Demonstratetheroleofriskunderfinancing.
CO4: Understandtheimplicationofcapitalbudgeting.
CO5: Understandtheimportanceofvaluesandethicsin financial decision-making.

INTERNATIONALFINANCIALREPORTING-II

CO1: TomakethestudentsunderstandInternational Financial Reporting.
CO2: Tounderstandthestructureoftheframeworkof international accounting
CO3: TolearnDisclosurerequirementsforcompaniesinthe form of financial notes and reports.
CO4: ToexaminethefundamentalrequirementsofIFRSona standard-by-standard basis
CO5: Toprovideguidanceonhowtouse IFRSinpractice.

AUDITING&ACCOUNTINGSTANDARDS

CO1: To understand the basic conceptsof Auditing and the nature and scope of auditing
CO2: To organize the various steps in an auditing process and point out the techniques of vouching of cash payments and receipts
CO3: ToanalyzethefeaturesandimportanceofInternal Control,Check and Audit
CO4: Topreparedifferenttypesofauditreportsandexplain the procedure for appointment and removal of a company auditor.
CO5: To understand the regulatory framework in which accountingstandardsareformulatedandoperated

CONSUMERBEHAVIOR COURSE

CO1: Statetheroleofconsumerandbehaviorallearning theories
CO2: ExplaintheBrandLoyaltyrelatedConcepts
CO3: Interprettheresults,developments,modelsand attributes of attitudes.
CO4: AnalyzeReferencegroupsandtheirrelevance,social class and culture and social stratification.
CO5: DemonstratevariousConsumerBehaviorModelsand Consumer decision process model

RESEARCHMETHODOLOGY

CO1: To understand and interpret the basic meaning of research,to define there search problem and construct the procedure for undertaking research
CO2: Toformulatehypothesisanddevelopanappropriate research design
CO3: Toclassifythedifferentsourcesofdataandanalyzethe various methods of data collection
CO4: Todevelopthemostappropriatesamplesizeand design as well as determination of sampling

and nonsampling errors.
CO5: To classify the various types of attitude measurement scales and applies the principles and format of report writing and presentation.

COMPUTER SIENCE AND MACHINE LEARNING DEPARTMENT

PROGRAM OUTCOMES

PO1. Scientific Knowledge: Apply the knowledge of Science, Mathematics, Engineering &Technology fundamentals to solve the complex problems.
PO2. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO3.Problem analysis: Identify, formulate, research literature, and analyze complex scientific problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO4. Modern tool usage: Create, select and apply appropriate techniques, resources, modern technology and IT tools to complex science and technological activities.
PO5. Environment and sustainability: Understand the impact of professional science and technological solutions in societal and environmental contexts and for sustainable development.
PO6.Individual and teamwork: Function objectively as an individual and as a member in diverse teams.
PO7. Communication: Communicate effectively on complex science &technology activities with society at large and able to write effective reports and documentation.
PO8. Life-long learning: Recognize the need and ability to engage in independent and lifelong learning in the context of technological change.

PROGRAM SPECIFIC OUTCOMES

PSO1: Appreciate the underlying mathematical relationships within and across Machine Learning algorithms and the paradigms of supervised and unsupervised learning.
PSO2: Be able to design and implement various machine learning algorithms in a range of real – world applications.
PSO3: implement problem solving skills in the broad area of programming concepts and manage different projects in interdisciplinary field. Ability to understand and adapt to the contemporary trends and best practices of industry and research standards.
PSO4: Ability to design and implement ethical sustainable solutions with a cutting-edge combination of Artificial Intelligence, Machine Learning, Natural Language Processing etc.

COURSE OUTCOMES

GENERAL ENGLISH –I

CO1: To distinguish between words which are either spelt or pronounced alike, yet render distinct meanings; imparting a sound clarity on everyday usage of language, and for developing the art of parallel

listening and writing.
CO2: To construct vocabulary and to gain understanding on the tense component, a pivotal constituent for language structuring and vocabulary building.
CO3: To identify with economical word constructions, paying specific attention in constructing sound writing skills.
CO4: To interpret functional grammar, the basic part involved in sentence constructing to improve linguistic skills.
CO5: To develop communication skills to provide a platform for language efficiency for effective language deliver

VALUE EDUCATION & PERSONALITY DEVELOPMENT

CO1: Students will be able to Differentiate Accepted norms and Counter values and be able to identify the various Dimensions of Human Development.
CO2: Students will be able to Demonstrate Love and Experience of God and identify the Basic Issues of Life and Happiness as a life goal.
CO3: They will able to Understand the importance of Concern for others and critique the various problems that deter the growth of the society.
CO4: The students will be able to Recognize the traits of a good personality and practice Self-exploration.
CO5: Students will be able to Interpret the Purpose of Life and Goal Setting and demonstrate Self-management.

FUNDAMENTALS OF IT AND DATA VISUALISATIONS

CO1: Understand basic computer terminology and number systems.
CO2: Learn about operating systems, and its types.
CO3: Learn about the applications of IT and Data Visualizations
CO4: Use of Data Visualizations.
CO5: Use of modern means of communications, types of networks and topologies.

DIFFERENTIAL EQUATIONS & MATRICES

CO1: Classify the differential equations with respect to their order and linearity. Solve differential equations of first order using numerical and analytical methods such as Integrating Factors.
CO2: Analyze and Solve basic application problems described by first order differential equations such as orthogonal trajectories.
CO3: Solve second order Homogeneous Equations with Constant Coefficients. Obtain exact and numerical solutions using differential equations technology.
CO4: Understand to find the rank and formulate the solution of set of a system of linear equations.
CO5: Determine the eigen values and eigen vectors.

PROBLEM SOLVING AND PROGRAMMING IN 'C'
CO1: Explain the basic introduction of computer and programming languages.
CO2: Categorize different data types, operators and data input /output functions in 'C'.
CO3: Develop programs using 'C' control structures, arrays and string concept.
CO4: Analyze larger problems into smaller ones using 'C' functions.
CO5: Create programs using the concept of structures, union and file handling in 'C'.

BASIC ELECTRONICS & CIRCUITS

CO1: Able to Understand what is electronics and terms related to it?
CO2: Understanding the passive components and their connections, sources & laws
CO3: Understanding the fundamentals of alternating current and terminology
CO4: Analyze semiconductors and understand the working of a diode and its applications.
CO5: Able to understand the construction and working of transistor, power supply.

GENERAL ENGLISH -II

CO1: To identify a sound understanding on the formation of words and to demonstrate the functional grammatical component in the sentence.
CO2: To paraphrase ideas and thoughts in a coherent, neat and organized manner in order to utilize the writing skills for sound writing propagandas.
CO3: To create an understanding on Indian Literature, alongside to develop and chisel their communication skills.
CO4: To recognize the moral element which underlies in the short story; an exposure to informal language.
CO5: To develop listening and speaking skills through effective sentence constructions and efficient delivery.

INDIAN HERITAGE AND CULTURE

CO1: Student will have knowledge about Indian Customs and Traditions.
CO2: Student can make use of the subject knowledge to attempt all kinds of competitive especially civil services.
CO3: the Subject helps the student community to have knowledge of historical and contemporary social, religious and political issues of the nation.

PROBABILITY & STATISTICS FOR ML

CO1: Understand the importance of descriptive statistics and use the probability theory in case of uncertain situations.
CO2: Employee the principle of linear regression with an understanding of correlation between two or more than two variables.
CO3: Use discrete and continuous probability distribution, including the requirements and making decisions.
CO4: Knowledge about formulating and testing of hypothesis, using critical values to draw conclusions and determine the probability of making errors in hypothesis test for large sample tests.
CO5: Understand and analyze various small sample tests.

VECTOR CALCULUS & NUMBER THEORY

CO1: Understand the derivatives and partial derivatives to apply on vector functions.
CO2: Use the Gradient operator to find the directional derivative of scalar functions.
CO3: Understand the various integration theorems relating to line, surface, and volume integrals.
CO4: Enhance the domain knowledge of number theory and acquire the ability to apply number theory algorithms and procedures to basic problems.
CO5: Get acquainted with the linear Congruences and significant theorems in Number theory.

FUNDAMENTALS OF DATA STRUCTURES USING 'C'

CO1: Choose appropriate data structures to represent data items in real world problems

CO2: Illustrate non-linear data structures like linked list
CO3: Organize the data using sorting in various linear data structures and determine time complexity
CO4: Construct data with nonlinear data structure using trees.
CO5: Explain the concept of graphs and b trees.

PYTHON PROGRAMMING

CO1: Explain the basics of Python Programming constructs.
CO2: Sub divides larger problems into smaller ones using functions
CO3: Apply various data structures problem-solving
CO4: Construct Python programs as a set of objects.
CO5: Select an appropriate exception handling depending on application and design file operations and Concurrent programming using Python standard library.