



MEDICAL LAB TECHNOLOGY
(GE -Inter -Departmental/Inter -Disciplinary)

Credits: 2

Semester: III

Subject Code: G18BT1T

No. of Lecture Hours: 30

Objectives:

- To provide core processes involved in the effective analysis of biological issues through the use of case studies, laboratory and field research work.

Outcome: Student will gain knowledge on the essence of metabolites and its concentrations to retain a homeostatic condition in the body.

Unit Specific Outcomes:

- Understand the importance and scope of MLT
- Understand about Human Physiology
- Understand about Blood and urine studies
- Understand the concepts of microbiology
- Identify different types of Blood groups

UNIT – I Introduction**6Hrs**

- What is MLT? Its importance and scope 2
- Contents of Laboratory request form 2
- Biosafety measures and disposal of laboratory waste 2

UNIT-II Introduction to Human Physiology

6Hrs

- What is Physiology 1
- Different systems of the body – Haemopoietic system, Reticuloendothelial system 2
- Lymphatic system, Circulatory system, Respiratory system, Digestive system, Endocrine system 3

UNIT – III Blood and Urine studies**6Hrs**

- Collection of Blood 1
- Studies on Blood sugar-Diabetes Mellitus 2
- Collection and preservation of Urine 1
- Abnormal constituents of Urine. 2



UNIT- IV Microbiology	6Hrs
• Structure of Bacteria	2
• Grams staining	2
• Antibiotic sensitivity test	2
UNIT –V Immunology	6 Hrs
• Principles of Blood groups	2
• Antigen- Antibody reactions	2
• ABO-RH blood groups	2

SUGGESTED READING:

1. Lehninger A.L. Nelson D.L. and Cox M.M. 1993. **Principles of Biochemistry**. II Edition. Kalyani Publishers.
2. Voet O, Voet G. 1994. **Biochemistry**. John Willey and Sons.
3. Stryer L. 1994 **Biochemistry** IV Edition
4. Zubay G, William C. Brown. 1997. **Biochemistry**. New York.



MEDICAL LAB TECHNOLOGY PRACTICALS (GENERAL ELECTIVE)

Credits: 1

Subject Code: G18BT1P

Semester: III

No. of Practical Hours: 30

Objectives:

- To demonstrate scientific inquiry in course and lab assignments.
- To demonstrate effective verbal and written communication skills appropriate to the scientific community.
- To demonstrate critical thinking skills in examining issues in the biological world.
- To demonstrate effective analysis of biological issues through the use of case studies, laboratory and field research work.
- To be academically prepared for professional training.

Outcome: Student can analyze and interpret data to evaluate the various parameters involved in functions of a healthy human body.

1. Lab instruction for personal safety precaution.	2
2. Blood Typing.	2
3. Grams staining.	2
4. Antibiotic sensitivity test	3
5. Methods of disposal of Hospital waste	3
6. Uses, Care and Maintenance of Centrifuge, Autoclave, Hot air oven in the laboratory.	3

SUGGESTED READING:

1. Sawhney S.K, Randhir Singh. 1992. **Introductory Practical Biochemistry.**
2. Thimmaiah S.R. 1991. **Standard Methods of Biochemical Analysis.**
3. Sadasivam S.Manickam A. **Biochemical Methods.** II Edition.

