



**Hindi Vidya Prachar Samiti's**

**Ramniranjan Jhunjhunwala College**

**of Arts, Science & Commerce**

***(Empowered Autonomous College)***

**Affiliated to**

**UNIVERSITY OF MUMBAI**

**Syllabus for the B.Sc.**

**Program: B.Sc. Medical Laboratory Technology**

**Program Code: RJSUMLT**

**National Education Policy (NEP 2020)**

**Level 4.5**

**(BSc MLT 2023-2024)**

SEMESTER	:	<b>III</b>
TITLE	:	<b>MAJOR THEORY 1</b>
TITLE OF THE SUBJECT/COURSE	:	BACTERIOLOGY AND CLINICAL BIOCHEMISTRY – 2
COURSE CODE	:	RJMAJMLT311
CREDITS	:	03
DURATION	:	45 hrs

**LEARNING OBJECTIVES**

1	To understand the methods for laboratory staining and culturing of the specimens for detection of microbes.
2	To understand the functioning of human body and how to co-relate the investigations' tests in biochemistry with the condition of the patient.

Course Outcome No.	On completing the course, the student will be able to:	PSO Addressed	Bloom's Levels
CO1	To practice methods for laboratory staining and culturing of the specimens for detection of microbes.	1, 3	BT level 1 & 2
CO2	To understand how to perform investigative procedures in clinical biochemistry more accurately.	1, 3	BT level 1 & 2
CO3	To perform better in a pathology lab.	1, 3	BT level 1 & 2

SEMESTER III			
Course Code : RJMAJMLT311		Title: BACTERIOLOGY AND CLINICAL BIOCHEMISTRY – 2	Credits
Unit	Unit Name	Topics	3
I	Bacteriology	Staining Methods & Aseptic Techniques, Culturing Microorganisms, Identification of Bacteria, Study of Gram Negative Bacteria, Study of Gram Positive Bacteria, Automation, Collection, Transport & Examination of Specimen.	2
II	Clinical Biochemistry	Renal Function Tests, Gastric Function Tests, Liver Function Tests, Cardiac Profile Tests, Acid base balance concepts & disorders, Enzymes, Vitamins, Interpretative Clinical Chemistry.	1
<b>References:</b> <ul style="list-style-type: none"> <li>• Textbook of Biochemistry – by Pankaja Naik</li> <li>• Textbook of Medical Laboratory Technology—by P. B. Godkar</li> </ul>			

SEMESTER	:	<b>III</b>
TITLE	:	<b>MAJOR THEORY 2</b>
TITLE OF THE SUBJECT/COURSE	:	HAEMATOLOGY AND IMMUNOLOGY – 1
COURSE CODE	:	RJMAJMLT312
CREDITS	:	03
DURATION	:	45 hrs

**LEARNING OBJECTIVES**

1	To understand the haematological diseases, haemostasis and coagulation.
2	To understand how to perform routine coagulation tests.
3	To understand the immunological reactions.
4	To understand the principles of serodiagnostic tests.

Course Outcome No.	On completing the course, the student will be able to:	PSO Addressed	Bloom's Levels
CO1	Perform routine coagulation tests.	1, 2	BT level 1 & 2
CO2	Understand the role of antibodies in diagnostic applications	1, 2	BT level 1, 2 & 3
CO3	Perform serological diagnosis of microbial diseases	1, 2	BT level 1, 2 & 3

**SEMESTER III**

Course Code : RJMAJMLT312		Title: HAEMATOLOGY AND IMMUNOLOGY – 1	Credits
Unit	Unit Name	Topics	3
I	Haematology	Introduction to Haematology, Haematological Diseases, Haemostasis, Coagulation and Routine Coagulation Tests	1.5
II	Immunology	Clinical Immunology, Factors influencing Immunity, Immunological Reactions & Related Terms, Antibodies & Immunoglobulin Classes, Role of Antibodies in Diagnostic Applications, Research Applications of Antibodies, Antigen-Antibody Interactions, Serological Diagnosis of Microbial Diseases, Principles of Serodiagnostic Tests	1.5

**References:**

- Textbook of Medical Laboratory Technology—by P. B. Godkar