SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

M.Sc. Medical Laboratory Technology (Semester-I)

March 2023 Examination **[Max. Marks :100]**

Time : 3 Hrs.

Sec-A

Clinical Biochemistry

Q.P Code : M1015

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **1 X 20 = 20 Marks**

1. Explain the dynamics of blood glucose homeostasis. Explain in brief one method for blood glucose estimation. Write a note on insulin testing. (10+5+5)

SHORT ESSAY **3X 10 = 30 Marks**

2. Define Enzymes. What are the characteristics of active site. Name 4 diagnostic enzymes with normal range and clinical significance (2+4+4)
3. What is Microalbuminuria and Glycated hemoglobin. Give its clinical significance
4. Explain different types of RNA and their function. Explain briefly how DNA purity is measured.(5+5)

Sec-B

Biomedical Techniques & Laboratory Management

Q.P Code: M1016

LONG ESSAY **1 X 20 = 20 Marks**

1. Define Chromatography. List different types of Chromatography. Write the principle and procedure of Thin layer chromatography and Ion exchange chromatography with their applications. (2+6+12)

SHORT ESSAY **3X 10 = 30 Marks**

2. Briefly explain Capillary electrophoresis and Iso electric focusing (5+5)
3. Define Centrifugation. What are the parts of a centrifuge. Give applications of Ultra centrifuge.
4. Give the principle and applications of Flurometry and Flame photometry.

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Sec-A

Clinical Microbiology

Q.P Code: M1025

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **1 X 20 = 20 Marks**

1. Draw a neat labelled diagram of the Bacterial cell. Describe the structure, types, functions and demonstration methods of flagella

SHORT ESSAY **3X 10 = 30 marks**

2. Describe the pathogenesis and laboratory diagnosis of Pulmonary Tuberculosis
3. Describe the pathogenesis and laboratory diagnosis of Cholera
4. Describe the laboratory diagnosis of Urinary tract infection.

Sec-B

Immunology

Q.P Code: M1026

LONG ESSAY **1 X 20 = 20 Marks**

1. Enumerate antigen antibody reactions .Describe the principle and diagnostic application of agglutination reactions with suitable examples.

SHORT ESSAY **3X 10 = 30 Marks**

2 Classify Autoimmune diseases. Describe the pathogenesis of Autoimmune diseases.

3 Describe the structure and biological functions of IgM

4 Acquired immunity

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Sec-A
Hematology
Q.P Code: M1035

Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.

LONG ESSAY **1 X 20 = 20 Marks**

1. Define anemia. Enumerate causes for macrocytosis. Discuss the laboratory investigation of megaloblastic anemia?

SHORT ESSAY **3X 10 = 30 Marks**

2. Describe the laboratory diagnosis of chronic myeloid leukemia
3. Discuss briefly about procedure and its interpretation of Reticulocyte count
4. Describe the laboratory diagnosis of multiple myeloma

Sec-B

Clinical Pathology & Immunopathology

Q.P Code: M1036

LONG ESSAY **1 X 20 = 20 Marks**

1. List the indications for Blood transfusion. Describe in detail about transfusion reactions

SHORT ESSAY **3X 10 = 30 Marks**

2. Describe the chemical examination of urine for ketone bodies and interpretation
3. Describe the pathogenesis with examples of Type 3 Hypersensitivity reaction
4. Describe the Stool examination

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