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### SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

#### (A DEEMED TO BE UNIVERSITY)

# M.Sc. Medical Laboratory Technology (Semester-I) April 2024 Examination

[Max. Marks :100]

Time: 3 Hrs.

Sec-A Clinical Biochemistry O.P Code: M1015 50 Marks

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

#### **LONG ESSAY**

 $1 \times 20 = 20 \text{ Marks}$ 

1. Define Enzymes and classify them with suitable examples. Give 2 theories proposed for explaining enzyme activity. How is enzyme activity calculated? (2+8+5+5)

 $\underline{SHORT\ ESSAY}$  3X 10 = 30 Marks

- 2. Explain procedure for GTT, with its indications and contraindications
- 3. Describe general structure of Lipoproteins. Give their site of formation, normal range and clinical significance
- 4. List plasma proteins with normal range and functions. Name 5 acute phase proteins with clinical significance.

Sec-B 50 Marks

# Biomedical Techniques & Laboratory Management Q.P Code: M1016

LONG ESSAY1 X 20 = 20 Marks

1. Define Electrophoresis and give its principle. List the different types. List the applications and limitations of each type of electrophoresis.(5+5+10)

SHORT ESSAY 3X 10 = 30 Marks

- 2. What is centrifugation technique. What are the parts of a centrifuge. Briefly explain Ultra centrifugation and its applications.
- 3. Define Chromatography. Give the principle and applications of and HPLC.
- 4. Give the principle, procedure and applications of Paper chromatography.



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Time: 3 Hrs. [Max. Marks :100] Sec-A 50 Marks

Clinical Microbiology **Q.P Code: M1025** 

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

 $\underline{\text{LONG ESSAY}} \qquad \qquad 1 \text{ X } 20 = 20 \text{ Marks}$ 

1. Describe the causative agent, mode of transmission ,pathogenesis and laboratory diagnosis of Gonorrhoea

 $\underline{SHORT\ ESSAY}$  3X 10 = 30 Marks

- 2. Describe the various culture media used in diagnostic bacteriology
- 3. Describe the clinical features, pathogenesis and laboratory diagnosis of tetanus
- 4. Describe the clinical features and laboratory diagnosis of Diphtheria

Sec-B 50 Marks

**Immunology** 

Q.P Code :M1026

LONG ESSAY 1 X 20 = 20 Marks

1. Describe different types of immunity . Describe the mechanism of acquired immunity and explain the different types with examples.

 $\underline{SHORT\ ESSAY}$  3X 10 = 30 Marks

- 2. Classify Autoimmune diseases . Describe the pathogenesis of Autoimmune diseases
- 3. Describe the modes of transmission of infection
- 4 Explain the mechanism and application of Agglutination reaction

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Time: 3 Hrs. [Max. Marks:100]
Sec-A 50 Marks

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 leukemia. Discuss the pathogenesis and phases and peripheral blood / bone marrow findings in Chronic myeloid leukemia.

 $\underline{SHORT\ ESSAY}$  3X 10 = 30 Marks

- 2. Describe about Hematocrit Procedure and interpretation
- 3. Discuss about Hemoglobin electrophoresis Indications and interpretation.
- 4. Describe the laboratory investigations and clinical features in iron deficiency anemia

Sec-B 50 Marks

# Clinical Pathology & Immunopathology Q.P Code: M1036

LONG ESSAY1 X 20 = 20 Marks

1. Describe the indications of blood transfusion and list the various components with uses. Write a note on transfusion transmitted infections.

 $\underline{SHORT\ ESSAY}$  3X 10 = 30 Marks

- 2. Describe the Stool examination
- 3. Describe the Ketonuria and its causes
- 4. Describe the etiopathogensis of Erythroblastosis Fetalis