

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

M.Sc. Medical Laboratory Technology (M.Sc. MLT) (Semester - II)

July- 2016 Examinations

Time: 3 Hrs.

[Max. Marks: 100]

Paper – I

**Clinical Biochemistry, Biomedical Techniques
& laboratory Management-II**

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

(Use separate answer booklet for section A & B)

Section – A

Clinical Biochemistry

MMLT-105

(50 Marks)

1 X 20 = 20 Marks

LONG ESSAY

1. Describe the mechanism of HCL secretion by the gastric mucosa. What are the indications for gastric juice analysis. Mention the different gastric function tests and describe any two in detail.

SHORT ESSAY

5 X 6 = 30 Marks

2. Xylose absorption test.
3. What are the precautions to be maintained during collection and transport of a sample for blood gas (ABG) analysis? Explain the principle of measurements of pH, pO₂ and pCO₂ in ABG analysis.
4. Biological importance and regulation of serum calcium in the body.
5. Mention the biological reference interval and any two conditions associated with alterations in the serum levels of. a. Sodium b. Potassium c. ALT
6. What are abnormal hemoglobin? Describe any two in detail.

Section – B

Biomedical Techniques & Laboratory Management

MMLT-106

(50 Marks)

(Use separate answer booklet for Section-B)

LONG ESSAY

1 X 20 = 20 Marks

1. Describe cell fractionation in detail. Add a note on marker enzymes.

SHORT ESSAY

5 X 6 = 30 Marks

2. Electronic data handling.
3. Describe the segregation and safe disposal of biomedical wastes.
4. Explain in detail uncouplers of biological oxidation. Mention any two inhibitors of ETC along with the site of inhibition.
5. Mention the different techniques for purification of proteins and describe any one technique for purification of proteins..
6. Hospital information system (HIS).

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Paper – II

Clinical Microbiology & Molecular Biology-II

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

(Use separate answer booklet for section A & B)

Section – A

Clinical Microbiology

MMLT-109

(50 Marks)

LONG ESSAY

1 X 20 = 20 Marks

1. Classify herpes viruses. Discuss in detail, the pathogenesis, clinical features and laboratory diagnosis of herpes simplex viruses.

SHORT ESSAY

5 X 6 = 30 Marks

2. Pathogenesis and laboratory diagnosis of entamoeba histolytica.
3. Describe the life cycle of Ancylostoma duodenale.
4. Laboratory diagnosis of malaria.
5. Dermatophytoses.
6. Write a note on Biomedical waste management.

Section – B

Molecular Biology

MMLT-110

(50 Marks)

(Use separate answer booklet for Section-B)

LONG ESSAY

1 X 20 = 20 Marks

1. Define Mutation. Discuss various methods of mutations. Add a note on significance of mutagenesis.

SHORT ESSAY

5 X 6 = 30 Marks

2. Plasmids.
3. Flow cytometry.
4. DNA finger printing.
5. Turner's syndrome.
6. Human karyotype.

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Paper – III

Hematology, Clinical Pathology & Medical Genetics- II

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

(Use separate answer booklet for section A & B)

Section – A

Hematology

MMLT-107

(50 Marks)

LONG ESSAY

1 X 20 = 20 Marks

1. Discuss briefly about automation in hematology laboratory.

SHORT ESSAY

5 X 6 = 30 Marks

2. Define DIC. Mention laboratory investigations in DIC.
3. Discuss in brief about second line tests in coagulation disorders.
4. PT and APTT.
5. Cleaning of glass ware in hematology laboratory.
6. Discuss about lab tests in platelet function disorders.

Section – B

Clinical Pathology & Medical Genetics

MMLT-108

(Use separate answer booklet for Section-B)

(50 Marks)

LONG ESSAY

1 X 20 = 20 Marks

1. Discuss in brief about prenatal screening and diagnosis of genetic disorders.

SHORT ESSAY

5 X 6 = 30 Marks

2. Pleural fluid examination.
3. Turner's syndrome.
4. Gastric fluid analysis.
5. Method and interpretation of pregnancy test.
6. Handling and examination of HIV infected CSF sample.

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