

**M.Sc. Medical Laboratory Technology (M.Sc. MLT)**

**First Year Semester - II**

July – 2017 Examination

Time: 3.00 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**

(50 marks)

Q.P. Code: MMLT-105

**LONG ESSAY**

**1 X 20 = 20 Marks**

1. What is cerebrospinal fluid? Name the normal constituents of CSF. Describe the procedure of collection of cerebrospinal fluid. Mention the characteristic features of cerebrospinal fluid in normal and various disease conditions. (2+3+5+10)

**SHORT ESSAY**

**5 X 6 = 30 Marks**

2. Write the biological reference range of total bilirubin, direct and indirect Bilirubin. Write briefly on various methods of estimation of serum Bilirubin.
3. Name the components of Renal calculi. Briefly write about the analysis of renal calculi.
4. Blood gas analysis. Principles, procedure, precautions to be taken while drawing the blood and transportation and clinical applications.
5. Automation in urine chemistry.
6. Types and potential hazards of biomedical waste.

**Section - B**

**Biomedical Techniques and Laboratory Management**

(50 Marks)

Q.P Code: MMLT - 106

*(Use separate answer booklet for Section A & B)*

**LONG ESSAY**

**1 X 20 = 20 Marks**

1. Define redox potential with example. Explain its significance in electron transport chain with schematic diagram. Mention various inhibitors of electron transport chain. (4+12+4)

**SHORT ESSAY**

**5 X 6 = 30 Marks**

2. Uses of computer in diagnostic laboratory.
3. Define cell fractionation. Name the different components of cell fractionation. Mention the methods of cell fractionation and write its clinical application.
4. High energy compounds.
5. Hospital information system.
6. Mention the different methods of purification of enzymes from cells and explain briefly any one method for enzyme purification.

\* \* \*

**M.Sc. Medical Laboratory Technology (M.Sc. MLT)**

**First Year Semester - II**

**July – 2017 Examination**

**Time: 3.00 Hrs.**

**[Max. Marks: 100]**

**Paper - II**

**CLINICAL MICROBIOLOGY AND 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**

**(50 marks)**

**Q.P. Code: MMLT-109**

**LONG ESSAY**

**1 X 20 = 20 Marks**

1. Classify malarial parasites. Discuss in detail the life cycle, pathogenesis and laboratory diagnosis of Plasmodium falciparum. Add a note on black water fever.

**SHORT ESSAY**

**5 X 6 = 30 Marks**

2. Oncogenic viruses.
3. Visceral leishmaniasis.
4. Candidiasis.
5. Dengue shock syndrome.
6. Aspergillosis.

**Section - B**

**Molecular Biology**

**(50 Marks)**

**Q.P Code: MMLT - 110**

***(Use separate answer booklet for Section A & B)***

**LONG ESSAY**

**1 X 20 = 20 Marks**

1. Discuss Molecular methods of diagnosing genetic diseases. Add a note on prenatal diagnosis of genetic diseases.

**SHORT ESSAY**

**5 X 6 = 30 Marks**

2. Genetics of cancer.
3. Molecular methods of diagnosing parasitic infections.
4. FISH.
5. Methods of chromosome analysis.
6. Di George's syndrome.

**\* \* \***

**M.Sc. Medical Laboratory Technology (M.Sc. MLT)**

**First Year Semester - II**

**July – 2017 Examination**

**Time: 3.00 Hrs.**

**[Max. Marks: 100]**

**Paper - III**

**HAEMATOLOGY, CLINICAL PATHOLOGY AND 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**

**(50 marks)**

**Q.P. Code: MMLT-107**

**LONG ESSAY**

**1 X 20 = 20 Marks**

1. List causes for thrombocytopenia and discuss idiopathic thrombocytopenic purpura.

**SHORT ESSAY**

**5 X 6 = 30 Marks**

2. Mixing experiments.
3. Vascular disorders of bleeding.
4. Antiphospholipid antibody syndrome.
5. Etiopathogenesis of disseminated intravascular coagulation.
6. Indications and complications of bone marrow aspiration.

**Section - B**

**Clinical Pathology and Medical Genetics**

**(50 Marks)**

**Q.P Code: MMLT - 108**

***(Use separate answer booklet for Section A & B)***

**LONG ESSAY**

**1 X 20 = 20 Marks**

1. Cerebrospinal fluid – macroscopic, biochemical and cytological examination

**SHORT ESSAY**

**5 X 6 = 30 Marks**

2. Hollanders test.
3. Turners syndrome.
4. Gene therapy.
5. Biomedical waste management.
6. X-linked inheritance.

**\* \* \***