Rajiv Gandhi University of Health Sciences, Karnataka

First Year M.Sc. (MLT) Degree Examination – 16-July-2021

[Time: 3 Hours] [Max. Marks: 100]

BIOCHEMISTRY – I
(RS-2)
Q.P. CODE: 9811

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.
Section A and section B are to be written in same Answer Book

Section A - Clinical Biochemistry [50 marks]

Answer All The Questions 10 X 10 = 100 Marks

1. Write in detail about the pH regulation mechanisms in our body. Add a note on acid-base disorders.
2. Write the clinical importance of enzymes and mention about their classification.
3. Write about the types, management and diagnosis of Diabetes Mellitus.
4. The structural organization of proteins. Add a note on determination of primary structure.
5. What are Lipoproteins? Write about their function and disorders.

Section B – Laboratory Principles & Techniques [50 marks]

6. Explain the principle of centrifugation. Elaborate on the types and applications of centrifuges. Add a note on cell fractionation.
7. Quality control in a clinical laboratory
8. Write the principle, instrumentation and applications of reflectance photometry.
9. Write the principle, procedure and application of agarose gel electrophoresis
10. Write the principle, procedure and applications of thin layer chromatography of amino acids.

First Year M.Sc. (MLT) Degree Examination - 19-Jul-2021

[Time: 3 Hours] [Max. Marks: 100]

MICROBIOLOGY – I
(RS-2)
Q.P. CODE: 9812

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.
Section A and section B are to be written in same Answer Book

Section A - Clinical Microbiology [50 marks]

Answer All The Questions 10 X 10 = 100 Marks

1. Cholera – describe pathogenesis and its laboratory diagnosis.
2. Describe clinical features and laboratory diagnosis of cryptococcosis.
3. Define sterilization and disinfection. Name the chemical agents with examples and describe gaseous agents.
4. Discuss pathogenesis, laboratory diagnosis of HIV. Add a note on NACO.
5. Amoebiasis – Describe the agent, life cycle, lab diagnosis.

Rajiv Gandhi University of Health Sciences, Karnataka

Section B – Immunology and Molecular Biology [50 marks]

6. Define and classify hypersensitivity reactions. Describe Type four reaction.
7. FISH – Principle and its application.
8. Recombinant DNA technology – principle and applications.
9. Discuss bacterial drug resistance.
10. Immunofluorescence – principle, types and applications.

First Year M.Sc. (MLT) Degree Examination - 22-Jul-2021

[Time: 3 Hours] [Max. Marks: 100]

Haematology and Blood Transfusion – I (RS-2)

Q.P. CODE: 9813

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.
Section A and section B are to be written in same Answer Book

Section A – Haematology and Clinical Pathology [50 marks]

Answer All The Questions 10 X 10 = 100 Marks

1. Discuss in detail the physical, chemical and microscopic examination of urine.
2. Write a short note on red cell indices.
3. Define and classify hemolytic anemias. Write briefly about Thalassemia's.
4. Classify leukemia. Write about acute lymphoblastic leukemia.
5. Discuss indications, contraindications and methods of collection of gastric juice.

Section B – Immunopathology and Medical Genetics [50 marks]

6. What are the different blood group systems? Discuss Bombay blood group.
7. Define hypersensitivity. Explain the different types of hypersensitivity reactions with examples.
8. What is diabetes mellitus? Describe the etiopathogenesis of diabetes mellitus.
9. What causes tuberculosis? Discuss etiopathogenesis and laboratory investigations of tuberculosis.
10. Define massive blood transfusion. Discuss the adverse blood transfusion reactions.

* * *
*

Rajiv Gandhi University of Health Sciences, Karnataka

First Year M.Sc. (MLT) Degree Examination - 22-Jul-2021

[Time: 3 Hours] [Max. Marks: 100]

HAEMATOLOGY AND BLOOD TRANSFUSION – I (RS3)

Q.P. CODE: 8035

Your answers should be specific to the questions asked.
Draw neat labeled diagrams wherever necessary.
Section A and section B are to be written in same Answer Book

Section A – Haematology and clinical pathology [50 marks]

Answer All The Questions 10 X 10 = 100 Marks

1. Define Acute Leukemia. Discuss the clinical features and lab diagnosis of Acute Myeloblastic leukemia.

2. Write in detail the Morphological classification of Anemias with examples.

3. Discuss the Quality control methods used for Automated Hematology analysers. Add a note on levey Jennings charts and their interpretation.

4. What is Thalassemia? Discuss the pathogenesis, peripheral blood findings and confirmatory test for β Thalassemia.

5. Draw a diagram of an Eosinophil. What is normal Absolute Eosinophil count? How is AEC estimated? List the causes of Eosinophilia.

Section B – Immunopathology and Medical Genetics [50 marks]

6. Explain the procedure and examination of Urine Sediment. Discuss the various sediment findings noted.

7. Discuss the indications, procedure and interpretation of Semen analysis. Add a note on the patient instructions that should be given before semen collection.

8. What is type 1 hypersensitivity? Explain the pathogenesis with examples.

9. Classify Autoimmune disorders. Write in brief the clinical features, pathogenesis and Lab diagnosis of Rheumatoid arthritis.

10. Explain Mendel’s laws of inheritance with examples.

* * * * *