Rajiv Gandhi University of Health Sciences, Karnataka

First Year M.Sc. (MLT) Degree Examination - 04-May-2026

Time: 3 Hours **Max. Marks: 100**

BIOCHEMISTRY – I (RS-3)
Q.P. CODE: 8034

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. Explain the various laboratory tests used in the diagnosis and management of diabetes mellitus.

2. Discuss regarding specimen collection for arterial blood gas analysis, conditions of sample rejection and parameters analysed with their normal levels.

3. What are clearance tests, briefly discuss creatinine clearance test and normal levels.

4. Composition and biochemical analysis of cerebrospinal fluid sample.

5. List the various enzymes markers in liver disease with their normal level and add a note on the principle of estimation of any one of them.

Section B – Laboratory Principles and Techniques [50 marks]

6. What is ion exchange chromatography explain in detail principle and applications of this technique.

7. Classify the different types of Biomedical waste generated in hospital laboratory. Write the importance of segregation and safe disposal methods of biomedical waste.

8. What are the advantages of laboratory accreditation? Explain the documents and records to be maintained necessarily in the laboratory for this purpose.

9. **Discuses Levey Jennings plot(L.J chart) and its interpretation. Add a note on Westgard rules**

10. Write briefly on cell fractionation technique and markers used for their identification.

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First Year M.Sc. (MLT) Degree Examination - 06-May-2026

[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. What is a Reticulocyte? Write in detail the principle and procedure of estimating Reticulocyte count. Add a note on normal Reticulocyte count and causes of Reticulocytosis.

2. What is Acute Leukemia? List the difference in morphology and cytochemistry findings between a Myeloblast and Lymphoblast.

3. Discuss normal hemostasis and draw a representative flowchart representing the normal coagulation cascade.

4. Write the principle, procedure and interpretation of Osmotic Fragility test.

5. What is meningitis? List the differences between lab findings in Pyogenic, Viral and tubercular meningitis

Section B – Immunopathology and Medical Genetics [50 marks]

6. Explain types of transplant rejection reactions.

7. Explain numerical chromosomal abnormalities with examples.

8. What is type 2 hypersensitivity? Explain the pathogenesis with examples.

9. Explain the clinical features, pathogenesis and laboratory diagnosis of SLE.

10. Describe the method of assessing Karyotype. Add a note on normal karyotype in males and females.

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First Year M.Sc. (MLT) Degree Examination - 08-May-2026

Time: 3 Hours **Max. Marks: 100**

MICROBIOLOGY – I (RS3)
Q.P. CODE: 8036

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. Normal flora of the body
2. Pulmonary tuberculosis – pathogenesis and laboratory diagnosis
3. Describe the general properties of Arboviruses. Discuss the pathogenicity and laboratory diagnosis of Dengue virus
4. Discuss the pathogenicity and laboratory diagnosis of Candidiasis
5. Mechanism of bacterial drug resistance

Section B – Immunology and Molecular Biology [50 marks]

6. Passive immunity
7. Type I hypersensitivity
8. Polymerase chain reaction
9. DNA finger printing
10. Differences between primary and secondary immune response

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