Rajiv Gandhi University of Health Sciences, Karnataka

Second Year M.Sc. (MLT) Degree Examination - 05-May-2026

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

BIOCHEMISTRY - PAPER – I (RS3)
Q.P. CODE: 8037

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

Answer All The Questions **10 X 10 = 100 Marks**

1. Discuss the pathway of Heme synthesis. Add a note on the cause, features and laboratory investigations done in various porphyrias.
2. Explain the diagnostic utility of cardiac markers with examples.
3. Classify hormones based on their mechanisms of action with examples. Give an account of usefulness of placental hormone in normal and abnormal pregnancy.
4. Enumerate the various biochemical tests done for assessing thyroid function with their normal levels. Write briefly on Anti TPO analysis in thyroid abnormalities.
5. Discuss the processes involved in the external quality control programme and proficiency testing of laboratory.
6. Discuss the tests done for new born screening in the clinical laboratory, mention the importance of new born screening.
7. Composition and tests done for the analysis of gall stones.
8. Discuss the various tests done for the determination of glomerular function. Add a note on GFR estimation.
9. Explain automation and various aspects of total lab automation of a clinical laboratory.
10. Define biological reference interval, write the procedure of establishment and utility in diagnosis.

Second Year M.Sc. (MLT) Degree Examination - 05-May-2026

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

HAEMATOLOGY and BLOOD TRANSFUSION - PAPER – I (RS3)
Q.P. CODE: 8042

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

Answer All The Questions **10 X 10 = 100 Marks**

1. Define and classify anemia. Describe the lab diagnosis of iron deficiency anemia in detail.
2. Describe the procedure and indications for bleeding time and clotting time tests.
3. Describe the principles and procedure of Hemoglobin electrophoresis.
4. Describe the etiopathogenesis and lab diagnosis of Disseminated intravascular coagulation.
5. Describe the classification of acute Leukemia and lab diagnosis of acute myeloid Leukemia.
6. Describe the laboratory tests in a case of Hemolytic disease of Newborn.
7. Describe different methods of ESR estimation.
8. **Describe biomedical waste management in a tertiary care hospital.**
   Or
   Antiphospholipid syndrome
9. Describe the Philadelphia chromosome and its significance.
10. Give a detailed account of Internal quality control measures in Hematology laboratory.

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year M.Sc. (MLT) Degree Examination - 07-May-2026

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

HAEMATOLOGY and BLOOD TRANSFUSION - PAPER – II (RS3)
Q.P. CODE: 8043

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

Answer All The Questions **10 X 10 = 100 Marks**

1. Classify blood group systems. Write briefly ABO system.
2. Write briefly on blood compatibility testing.
3. Paternity testing.
4. Define apheresis, types of apheresis and write in detail on methods of apheresis.
5. Autologus transfusion.
6. Discuss the importance of Rh system, Du variant of Rh system and Bombay blood group.
7. Fresh frozen plasma and its indication.
8. **Medico legal aspects of blood transfusion**
9. Organisation in blood bank.
10. Stem cell processing and storage.

Second Year M.Sc. (MLT) Degree Examination - 05-May-2026

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

MICROBIOLOGY – PAPER – I (RS3)
Q.P. CODE: 8047

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

Answer All The Questions **10 X 10 = 100 Marks**

1. Discuss in detail pathogenesis and laboratory diagnosis of pulmonary tuberculosis.
2. Classify immunity. Explain in detail about mechanisms of innate immunity.
3. Explain pathogenesis and laboratory diagnosis of Diarrhogenic E.coli.
4. Classify immunoglobulins. Explain structure, properties and functions of IgG antibody.
5. Enumerate organism causing UTI. Explain in detail laboratory diagnosis of UTI.
6. Write in detail pathogenesis, laboratory diagnosis of Tetanus.
7. Explain in detail about CSSD.
8. Write in detail about mechanism and detection of Methicillin resistant staphylococcus aureus.
9. Define and classify Hypersensitivity. Explain in detail about Anaphylaxis.
10. Enumerate sexually transmitted diseases. Add a note on bacterial vaginosis.

****

Rajiv Gandhi University of Health Sciences, Karnataka

Second Year M.Sc. (MLT) Degree Examination - 07-May-2026

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

MICROBIOLOGY – PAPER– II (RS-3)
Q.P. CODE: 8048

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

Answer All The Questions **10 X 10 = 100 Marks**

1. Oncogenic viruses
2. Eumycotic Mycetoma
3. Pathogenicity and laboratory diagnosis of Herpes Simplex Viruses
4. Viral hemorrhagic fevers
5. Extra intestinal Amoebiasis
6. Pathogenesis and laboratory diagnosis of Cryptosporidiosis
7. Ancylostoma duodenale
8. Laboratory diagnosis and prophylaxis of rabies
9. Mucor mycosis
10. Stool examination for laboratory diagnosis of parasitic infections

****