Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - APRIL-2019

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

BIOCHEMISTRY – II

Paper - I (Revised Scheme – 2)

Q.P. CODE: 9814

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]

LONG ESSAY **1 X 20 = 20 Marks**

1. Discuss the formation and fate of Bilirubin in the body. Add a note on various disorders associated with bilirubin metabolism.

SHORT ESSAY **3 X 10 = 30 Marks**

2. Explain the process and importance of Neonatal screening to identify inborn errors of metabolism.
3. Describe thyroid function test. Discuss the utility of anti-TPO in diagnosing thyroid abnormalities.
4. Give an account of collection, types of sample and preservatives for urine analysis. List the clinical importance and reference intervals of routinely tested biochemical analytes of urine.

Section B – Laboratory Management [50 marks]

LONG ESSAY **1 X 20 = 20 Marks**

5. Define electrophoresis. Explain the principle, procedure and application of Polyacrylamide gel electrophoresis.

SHORT ESSAY **3 X 10 = 30 Marks**

6. Laboratory information systems
7. Discuss Point of Care Testing under the following headings: (a) Classification (b) Characteristics of POCT analyzer (c) Applications.
8. Discuss the sources, route of entry, toxic effects and analysis of Heavy metals.

* * *
*

Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - APRIL-2019

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

BIOCHEMISTRY – II

Paper – II (Revised Scheme – 2)

Q.P. CODE: 9815

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Give a detailed account of hormonal regulation of blood glucose level. Add a note on diagnostic criteria for Diabetes mellitus. Explain GDM.
2. Describe the sources, daily requirement, functions and deficiency symptoms of Vitamin D.

SHORT ESSAY **6 X 10 = 60 Marks**

3. What is Gout? Describe the types, causes, clinical findings and treatment of Gout.
4. Nephelometry
5. Oncogenes
6. Disorders of Copper metabolism
7. Explain Iron Absorption and its disorders.
8. Define Enzymes. Write the factors affecting Enzyme activity.

* * * * *

II Year M.Sc. (MLT) Degree Examination - APRIL-2019

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

Microbiology – II

Paper – I (Systematic Bacteriology, Applied Microbiology and Immunology) (Revised Scheme – 2)

Q.P. CODE: 9816

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Describe the etiology, pathogenesis and laboratory diagnosis of Cholera. Add a note on its prophylaxis.
2. Enumerate Antigen-Antibody reactions. Explain in detail about mechanism and applications of precipitation reactions.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Laboratory diagnosis of Staphylococcal infections
4. Laboratory diagnosis of Diphtheria
5. Diarrheagenic Escherichia coli
6. Preparation and applications of Monoclonal antibodies
7. Enumerate Zoonotic infections. Explain the laboratory diagnosis of Zoonoses.
8. Polymerase Chain Reaction (PCR)

* * * * *

Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - APRIL-2019

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

Microbiology – II

Paper – II (Virology, Mycology and Parasitology)

(Revised Scheme – 2)

Q.P. CODE: 9817

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Enumerate tissue nematodes. Describe the life cycle, pathogenicity and laboratory diagnosis of Wuchereria bancrofti.
2. Describe the morphology, pathogenicity, laboratory diagnosis and immune prophylaxis of Rabies virus.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Life cycle of Ascaris lumbricoides
4. Laboratory diagnosis of Malaria
5. MMR vaccine
6. Dengue virus – pathogenicity and lab diagnosis
7. Rhinosporidiosis
8. Mycotoxins

* * * * *

II Year M.Sc. (MLT) Degree Examination - April-2019

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

Haematology and Blood Transfusion – II

Paper – I

(Revised Scheme – 2)

Q.P. CODE: 9818

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Classify the coagulation disorders. Discuss clinical features, pathophysiology and laboratory diagnosis of haemophilia A and B.
2. Explain normal haemostatic mechanism in detail.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Define Disseminated intravascular coagulation. Discuss the clinical features, etiopathogenesis and laboratory findings of DIC.
4. Laboratory investigations in Thrombotic disorders
5. Bernard Soulier syndrome
6. Automation in hematology
7. ITP
8. Antiphospholipid antibody syndrome

* * * * *

Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - APRIL-2019

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

Haematology and Blood Transfusion – II

Paper – II

(Revised Scheme – 2)

Q.P. CODE: 9819

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Define hemapheresis. Describe the types, machines and technique of hemapheresis.
2. Organization of blood bank

SHORT ESSAY **6 X 10 = 60 Marks**

3. Paternity testing
4. What is blood banking? Write a note on Autologous transfusion.
5. Adverse donor reactions
6. Pretransfusion testing
7. Transfusion related graft versus host reaction
8. Enumerate different types of blood components and write in briefly preparation of FFP and Cryoprecipitate.

* * * * *

II Year M.Sc. (MLT) Degree Examination – APRIL-2019

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

Haematology and Blood Transfusion – II

Paper – II

(Revised Scheme – 2)

Q.P. CODE: 9819

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

LONG ESSAY **2 X 20 = 40 Marks**

1. What is quality assurance? Explain quality assurance in blood bank in detail.
2. Describe the blood components, their preparation, shelf life, storage and indications for use.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Explain cross matching and its importance.
4. Describe calcium chelating anticoagulants and their uses.
5. Autologous transfusion
6. Write a note on Rh system and its clinical significance and Rh typing techniques.
7. Write a note on importance of blood grouping.
8. Write a note on stem cell processing, storage and indications.

* * * * *

Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - SEP-2019

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

BIOCHEMISTRY – II

Paper - I (Revised Scheme – 2)

Q.P. CODE: 9814

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]

LONG ESSAY **1 X 20 = 20 Marks**

1. Give an account of various tests to assess liver function.

SHORT ESSAY **3 X 10 = 30 Marks**

2. Describe the clinical utility of Cardiac markers in diagnosis and management.
3. What are Renal calculi? Mention its types. Describe the lab analysis of renal calculi.
4. Hemoglobinopathy

Section B – Laboratory Management [50 marks]

LONG ESSAY **1 X 20 = 20 Marks**

5. Discuss the various aspects of Automation of a clinical lab.

SHORT ESSAY **3 X 10 = 30 Marks**

6. Describe the analytical methods and clinical utility of Therapeutic Drug Monitoring.
7. Laboratory Information System
8. Define reference interval. Explain different methods to establish reference intervals. Add a note on its diagnostic efficacy.

* * * * *

Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - OCT-2019

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

BIOCHEMISTRY – II

Paper – II (Revised Scheme – 2)

Q.P. CODE: 9815

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Describe the various types of Enzyme inhibition. Add a note on clinical importance of Competitive inhibition.
2. Classify Lipoproteins based on Ultracentrifugation and electrophoretic mobility. Discuss the metabolism of LDL. Give an account of involvement of LDL cholesterol in Atherosclerosis.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Discuss the biochemical functions and deficiency manifestations of Vitamin A.
4. Nephelometry and Turbidimetry
5. What are free radicals? Discuss free radicals under the following headings (a) Generation (b) Damage caused (c) Scavenger systems.
6. Discuss the functions and regulation of plasma Calcium level.
7. Describe the metabolic changes and complications of Diabetes mellitus. Add a note on Gestational Diabetes mellitus.
8. Define enzymes. Write the factors affecting Enzyme activity.

* * * * *

II Year M.Sc. (MLT) Degree Examination - OCT-2019

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

Microbiology – II

Paper – I (Systematic Bacteriology, Applied Microbiology and Immunology)
(Revised Scheme – 2)

Q.P. CODE: 9816

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Describe the morphology, cultural characteristics, pathogenicity and laboratory diagnosis of Neisseria meningitides.
2. Enumerate antigen – antibody reactions. Describe the principle, methodology and chemical applications of precipitation reactions with suitable examples.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Automation in Microbiology laboratory
4. Laboratory diagnosis of Tuberculosis
5. CSSD
6. Enumerate zoonotic infection. Describe the laboratory diagnosis of Leptospirosis.
7. Laboratory diagnosis Syphilis
8. Ig A antibody – structure, properties and function

* * * * *

Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - OCT-2019

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

Microbiology – II

Paper – II (Virology, Mycology and Parasitology)

(Revised Scheme – 2)

Q.P. CODE: 9817

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Explain the morphology, pathogenesis and laboratory diagnosis of Human Immunodeficiency Virus.
2. Classify Cestodes. Explain the morphology, life cycle, pathogenesis and laboratory diagnosis of Taenia solium.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Concentration techniques of stool examination for ova and cyst
4. Laboratory diagnosis of Kala azar
5. Morphology and antigenic variation in Influenza virus
6. Kyasanur Forest Disease (KFD)
7. Mention the etiology of opportunistic fungal infection. Explain the laboratory diagnosis of Aspergillosis.
8. Pathogenesis and laboratory diagnosis of Histoplasmosis

* * * * *

II Year M.Sc. (MLT) Degree Examination - OCT-2019

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

Haematology and Blood Transfusion – II

Paper – I

(Revised Scheme – 2)

Q.P. CODE: 9818

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Discuss in detail normal hemostasis.
2. Discuss in detail the investigation for hemorrhagic disorders.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Platelet quantitative disorders
4. Haemophilia
5. Urea solubility test
6. Antiphospholipid antibody
7. Glanzmann’s thrmobosthenia
8. Platelet count and clot retraction time

* * * * *

Rajiv Gandhi University of Health Sciences

II Year M.Sc. (MLT) Degree Examination - OCT-2019

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

Haematology and Blood Transfusion – II

Paper – II

(Revised Scheme – 2)

Q.P. CODE: 9819

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Discuss in detail non infectious blood transfusion reactions, their investigation and managements.
2. Write about blood bank procedure. Add a note on quality control.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Rh antibody titration
4. Name the transfusion transmitted diseases. Explain the screening of blood for infective materials.
5. Autologous blood transfusion
6. Explain different types of Coombs test and its applications.
7. Hemolytic disease of new born
8. Haemapheresis

* * * * *