Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination - May 2010

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

BIOCHEMISTRY - II

Paper - II

DR. MULLER'S MEDICAL LIBRARY

Q.P. CODE : 9675

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 glycolysis? Describe the pathway. Add a note on the energetics regulation and inborn errors associated with this metabolic pathway.
2. Write an essay on aromatic aminoacidurias.

SHORT ESSAY **6X10= 60 Marks**

3. Functions of applications and apolipoproteins. Add a note on Frederickson's classification of hyperhnoproteinemias
4. Describe the catabolism of purines. Write briefly on the disorders associated with the pathway
5. Describe the wald's visual cycle. Add a note on RDA & sources of vitamin A.
6. Explain the absorption and transport of Iron. Discuss the iron storage disorders
7. Describe the hypothalamic hormones and give their functions
8. Explain the role of Radio isotopes in research, diagnosis and therapy.

Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination - May 2010

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

BIOCHEMISTRY - II

Paper - I

Q.P. CODE : 9674

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 a detailed account of bilirubin metabolism. Explain different types of jaundice. Discuss the use of bilirubinometer as POCT

SHORT ESSAY **3 X10= 30 Marks**

2. Explain the biochemical changes in Respiratory Acidosis and Metabolic Acidosis
3. Enumerate current analytical methodologies for Thyroid testing
4. Discuss the tumour markers Alpha-fetoprotein and Carcinoembryonic antigen. Add a note on their analytical methodology

Section B – Pharmacological Biochemistry [50 marks]

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

5. Write an essay on Laboratory evaluation of drug of abuse

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

6. Explain the role of therapeutic drug monitoring antide pressants and Antipsychotics therapy
7. Explain Patho Physiological basis of any four toxicological syndrome
8. Enumerate the differences between phase I and phase II drug metabolism

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Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination – May 2010

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

MICRO-BIOLOGY - II

Systematic Bacteriology, Applied Microbiology and Immunology

Paper - I

Q.P. CODE : 9676

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 methods of collection, transportation and processing of clinical specimens in clinical bacteriology.
2. Role of complement in health and disease.

SHORT ESSAY **6X10= 60 Marks**

3. Bacteriological analysis of water.
4. Quality control in Microbiology.
5. Enumerate the differences between T and B cells.
6. Monoclonal antibodies and its applications
7. Enzyme linked Immunosorbent assay (ELISA)
8. Automated techniques in clinical microbiology

Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination – May 2010

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

MICROBIOLOGY - II

Virology, Mycology and Parasitology

Paper - II

Q.P. CODE : 9677

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

2 X 20 = 40 Marks

LONG ESSAY

1. Classify Hepatitis virus. Describe the morphology, pathogenesis and laboratory diagnosis of Hepatitis B virus. Add a note on its prevention.
2. Describe the morphology, life cycle, pathogenesis, laboratory diagnosis and preventions of Leishmania donovani

CENTRAL LIBRARY

6X10= 60 Marks

SHORT ESSAY

3. Larva migrans
4. Malarial vaccines
5. Taenia solium
6. Laboratory diagnosis of HIV (Human Immunodeficiency virus)?
7. Fungal stains
8. Mycetoma

Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination – May 2010

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

HAEMATOLOGY & BLOOD TRANSFUSION - II

Paper - I

Q.P. CODE : 9678

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

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

1. Classify plasma cell disorders. Discuss clinical features & laboratory investigation of plasma cell myeloma.

2. Discuss indications & contraindications of bone marrow aspiration & trephine biopsy.

SHORT ESSAY **6X10= 60 Marks**

3. Haemophilia
4. Automation in haematology
5. Coomb's test
6. Osmotic fragility test.
7. Kleihauer acid elution test.
8. Test for G6PD deficiency

Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination – October 2010

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

HAEMATOLOGY & BLOOD TRANSFUSION - II

Paper - II

Q.P. CODE : 9679

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. What are the different methods of apheresis? Discuss the indication and complications of granulocytapheresis. How can you increase the granulocyte yield?
2. Discuss in detail noninfectious blood transfusion reactions, their investigations and management.

SHORT ESSAY **6X10= 60 Marks**

3. Pathogenesis of graft versus host reaction.
4. Discuss in brief tissue banking.
5. Discuss Rh system – inheritance and nomenclature.
6. Give a brief note on future trends in blood banking.
7. Quality control of reagents in blood banking.
8. Discuss the different types of compatibility testing.

Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination – October 2010

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

HAEMATOLOGY & BLOOD TRANSFUSION - II

Paper - I

Q.P. CODE : 9678

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 normal Morphology and abnormal forms of Red blood cells. Add a note on Leishman stain preparation & staining.
2. Define thrombocytopenia. Discuss the various investigations in a case of haemorrhagic disorder.

SHORT ESSAY **6X10= 60 Marks**

3. Bone Marrow preparation and staining.
4. Role of electrophoresis in plasma cell disorders.
5. Osmotic fragility test.
6. Cleaning of glassware.
7. Thrombotic work up.
8. Normal and abnormal hemoglobins.

Rajiv Gandhi University of Health Sciences

Second Year M.Sc. (MLT) Degree Examination – October 2010

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

MICROBIOLOGY - II

Virology, Mycology and Parasitology

Paper - II

Q.P. CODE : 9677

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, pathogenesis, laboratory diagnosis of Rabies virus. Add a note on immunoprophylaxis against Rabies.
2. Classify Cestodes. Enumerate the tape worm infections in man and discuss their laboratory diagnosis.

SHORT ESSAY **6X10= 60 Marks**

3. Primary amoebic meningoencephalitis.
4. Trichuris trichiura
5. Asexual life cycle of plasmodium falciparum
6. Oncogenic DNA viruses
7. Mycotoxicosis
8. Chromoblastomycosis

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Second Year M.Sc. (MLT) Degree Examination – October 2010

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

MICRO-BIOLOGY - II

Systematic Bacteriology, Applied Microbiology and Immunology

Paper - I

Q.P. CODE : 9676

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

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

1. Define nosocomial infections. What are the sources and route of entry of nosocomial infection? What are the strategies involved in prevention and control of nosocomial infection?
2. Discuss the morphology, transmission and laboratory diagnosis of HIV

SHORT ESSAY **6X10= 60 Marks**

3. Chancroid
4. Histocompatibility testing
5. Mechanism of autoimmunity
6. Bacterial diagnosis of upper respiratory tract infection
7. Immunoelectrophoresis.
8. Bacteriology of milk.

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Second Year M.Sc. (MLT) Degree Examination - October 2010

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

BIOCHEMISTRY - II

Paper - II

Q.P. CODE : 9675

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

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

1. Discuss diabetes mellitus. Give the details of diagnostic and monitoring criteria for diabetes. How do you differentiate severe and mild diabetes mellitus by performing tolerance test?
2. Describe the biosynthesis of purine ribonucleotides. Add a note on inhibitors of purine synthesis and clinical manifestations of Gout.

SHORT ESSAY **6X10= 60 Marks**

3. What are radioisotopes? Give its applications and detection.
4. Give an account of signal transduction. List the hormones secreted by posterior pituitary gland.
5. Explain the clinical features and laboratory findings in disorders of the plasma proteins.
6. Discuss in brief the absorption, transport, storage and biochemical functions of vitamin A.
7. Write the sources, RDA, biochemical role, disorders and hormonal regulation of Phosphorus metabolism.
8. Explain the chemistry and structure of different types of RNA.

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Second Year M.Sc. (MLT) Degree Examination - October 2010

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

BIOCHEMISTRY - II

Paper - I

Q.P. CODE : 9674

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. Describe the renal function tests in detail and add a note on creatinine clearance test

SHORT ESSAY **3 X10= 30 Marks**

2. Thyroid function tests
3. Describe blood gas analysis
4. Describe automation technology in laboratory

Section B – Pharmacological Biochemistry [50 marks]

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

5. Explain therapeutic drug monitoring in detail

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

6. Describe the guidelines of emergency toxicology
7. Explain the difference between phase I & II drug metabolism reactions
8. Explain the major drug abuse and their clinical manifestation

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