Rajiv Gandhi University of Health Sciences

First Year M.Sc. (MLT) Degree Examination - May 2012

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

BIOCHEMISTRY - I

Q.P. CODE : 9671

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 structural levels of organization of proteins

SHORT ESSAY **5 X 6 = 30 Marks**

2. Write the functions of glycosaminoglycans
3. Enumerate the differences between DNA and RNA
4. Define competitive inhibition and add a note on their clinical significance
5. Describe the composition and clinical significance of cerebrospinal fluid
6. How do you analyze gastric juice?

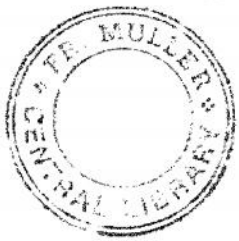
Section B - Biomedical Techniques & Lab. Management [50 marks]

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

7. Define Electrophoresis. Describe the procedure & Principle of paper electrophoresis

SHORT ESSAY **5 X 6 = 30 Marks**

8. Explain laboratory design
9. Describe Atomic Absorption Spectrometry
10. Name the inhibitors & Uncouplers of Electron Transport Chain
11. Describe the safe management of biomedical waste
12. Application of Radioisotopes in diagnosis



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Rajiv Gandhi University of Health Sciences

First Year M.Sc. (MLT) Degree Examination - May 2012

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

MICROBIOLOGY - I

Q.P. CODE : 9672

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]

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

1. Describe the etiology, pathogenesis and laboratory diagnosis of diphtheria. Add a note on its prophylaxis.

SHORT ESSAY **5 X 6 = 30 Marks**

2. Diffusion methods of antibiotic sensitivity testing.
3. Life cycle of Plasmodium in intermediate host.
4. Laboratory diagnosis of gas gangrene
5. Mechanisms of antigenic variations in influenza virus.
6. Laboratory diagnosis of dermatophytosis

Section B – Immunology and Molecular Biology [50 marks]

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

7. Define the complement system. Describe the classical complement cascade pathway and a note on its biological functions.

SHORT ESSAY **5 X 6 = 30 Marks**

8. Physiological barriers in innate immunity
9. Functions of T-cells.
10. Types of antigens with examples
11. Secondary immune response
12. Mechanism and functions of flow cytometry

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Rajiv Gandhi University of Health Sciences

First Year M.Sc. (MLT) Degree Examination - May 2012

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

HAEMATOLOGY AND BLOOD TRANSFUSTION - I

Q.P. CODE: 9673

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**

Sectioin A - Haematology and Clinical Pathology [50 Marks]

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

1. Define leukemias. Describe peripheral smear bone marrow & cytochemistry in a case of acute lymphatic leukemia

SHORT ESSAY **5 X 6 = 30 Marks**

2. Types of coomb's test and their importance
3. Microscopic examination of CSF
4. Investigations in a case of G6PD deficiency
5. Lab investigations in a case of ITP (Idiopathic thrombocytopenic purpura)
6. Causes of iron deficiency anaemia

Section B - Immunology and Medical Genetics [50 Marks]

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

7. Define A granuloma. Discuss immuniological mechanisms involved in the formation of granuloma. Give 4 exaples of granulomatous disease. Discuss one of the granulomatoos disease

SHORT ESSAY **5 X 6 = 30 Marks**

8. Describe classical mendelian inheritance
9. Causes of agranulocytosis
10. Mention 5 transfusion reactions. Discuss one of them in detail
11. Sex chromatin study
12. Discuss Immunology of Aids.

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Rajiv Gandhi University of Health Sciences

First Year M.Sc. (MLT) Degree Examination - Nov 2012

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

BIOCHEMISTRY - I

Q.P. CODE : 9671

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 classification of amino acids in detail, with suitable examples. Add a note on properties of amino acids.

SHORT ESSAY **5 X 6 = 30 Marks**

2. Write a short note on ' Polysaccharides'.
3. Explain the significance of lipids in our system.
4. Discuss the different factors affecting the enzyme activity.
5. Write the clinical significance of cerebrospinal fluid (CSF) analysis.
6. Explain the clearance test for kidney function with an example.

Section B - Biomedical Techniques & Lab. Management [50 marks]

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

7. Discuss the various aspects of laboratory designing in detail. Add a note on total Quality management in a laboratory.

SHORT ESSAY **5 X 6 = 30 Marks**

8. Write a note on hazardous waste in the clinical laboratory and its management
9. What are ion selective electrodes? Write their applications in the field of medicine.
10. Explain the principle and applications of ultra centrifugation.
11. Write the components of electron transport chain in order. And add a note inhibitors.
12. Discuss in brief the principle and applications of ion exchange chromatography.

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Rajiv Gandhi University of Health Sciences

First Year M.Sc. (MLT) Degree Examination - Nov 2012

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

MICROBIOLOGY - I

Q.P. CODE : 9672

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]

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

1. Define and classify sterilization with examples. Explain in detail the working principle, articles sterilized and sterilization controls of an autoclave

SHORT ESSAY **5 X 6 = 30 Marks**

2. Laboratory diagnosis of gas gangrene
3. Diffusion methods of antibiotic sensitivity testing.
4. Laboratory diagnosis of dermatophytes
5. Life cycle of plasmodium falciparum.
6. Laboratory diagnosis of leptospirosis.

Section B – Immunology and Molecular Biology [50 marks]

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

7. Classify immunoglobulins. Describe the structure of an immunoglobulin. Add a note on functional properties of immunoglogulins

SHORT ESSAY **5 X 6 = 30 Marks**

8. Methods of chromosome analysis
9. RFLP technique
10. Types of RNA and their functions
11. Alternate compliment pathway.
12. Memory cells

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Rajiv Gandhi University of Health Sciences

First Year M.Sc. (MLT) Degree Examination - Nov 2012

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

HAEMATOLOGY AND BLOOD TRANSFUSTION - I

Q.P. CODE : 9673

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**

Sectioin A - Haematology and Clinical Pathology [50 Marks]

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

1. Define anaemia. Discuss etiology, clinical features and laboratory investigations in a case of megaloblastic anaemia

SHORT ESSAY **5 X 6 = 30 Marks**

2. Investigations in a case of multiple myeloma
3. Peripheral smear and investigations in a case of chronic lymphocytic leukemia
4. Importance of augmented histamine test
5. Discuss organization and quality control in the laboratory
6. Antiphospholipid antibody syndrome

Section B - Immunology and Medical Genetics [50 Marks]

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

7. Describe the mechanism of immunie complex disease name 4 conditions in which immune complexes play an important role in pathogenesis

SHORT ESSAY **5 X 6 = 30 Marks**

8. Down's syndrome
9. Histocompatibility testing
10. Enumerate storage disorder and briefly describe one of them
11. Name 4 tumor markers briefly write on one of them
12. Erythro blastosis foetalis

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