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Rajiv Gandhi University of Health Sciences

9671_I_2010_S15

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

[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. What is enzyme inhibition? Describe competitive inhibition and its applications. Write a note on any 5 enzymes used in clinical diagnosis. **1 X 20 = 20 Marks**

SHORT ESSAY

2. Explain Xylose absorption test **5 X 6 = 30 Marks**
3. Function of sodium. Explain hypernatremia & Hyponatremia
4. Galactosemia. Add a note on laboratory diagnosis.
5. Classify lipids with examples
6. Qualitative tests for the organic and inorganic constituents of normal urine.

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

LONG ESSAY

7. What is oxidative phosphorylation? Describe the process of ATP generation in detail. **1 X 20 = 20 Marks**

SHORT ESSAY

8. Ultra centrifugation **5 X 6 = 30 Marks**
9. Lon selective procedures
10. Explain the laboratory management under the following headings (a) processing of lab data (b) Proficiency testing
11. Biomedical waste management
12. Principle and application of polyacrylamide gel electrophoresis.

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Rajiv Gandhi University of Health Sciences

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

[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. Discuss the pathogenesis and laboratory diagnosis of enteric fever. Add a note on its prophylaxis

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

2. Methods of bacterial culture
3. TRIC agents
4. Pathogenesis and laboratory diagnosis of Y. pestis infection
5. Cryptosporidium parvum
6. Oncogenic virus

Section B – Immunology and Molecular Biology [50 marks]

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

7. Define vaccine. Explain the different types of vaccines and their preparation. Add a note on adjuvants

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

8. Mixed lymphocyte culture
9. DNA finger printing
10. Genetic code
11. IgM
12. Plasmids

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Rajiv Gandhi University of Health Sciences

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

[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 anemia. Classify anemias. Discuss the laboratory diagnosis in a case of hemolytic anemia.

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

2. Red cell indices
3. Microscopic examination of semen.
4. Sputum – Collection and physical examination
5. Microscopic examination of stool
6. Biomedical waste management.

Section B - Immunology and Medical Genetics [50 Marks]

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

7. Enumerate the immune deficiency disorders. Discuss the pathology and lab diagnosis of acquired immunodeficiency syndrome.

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

8. Evaluation of circulatory immune complexes.
9. Bone marrow transplantation
10. Blood compatability testing.
11. Erythroblastasis Fetalis.
12. Anaphylaxis.

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Rajiv Gandhi University of Health Sciences

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

[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. Classify liver function tests. Describe the principle, procedure and clinical significance of Bilirubin estimation.

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

2. Clinical significance of CSF analysis.
3. Explain the estimation of serum alkaline phosphatase by kind and king method.
4. Secondary structure of proteins
5. What is calculi? How is renal calculi analyzed in a laboratory
6. Explain the factors affecting enzyme activity.

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

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

7. What is centrifugation? Mention the different types of centrifugation and their applications. Describe the principle and technique of differential centrifugation.

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

8. Thin layer chromatography
9. What is internal quality control. Explain the procedure to prepare in house quality control sera
10. Applications of Radio isotopes in research and clinical biochemistry
11. Explain the design of medium sized laboratory
12. Safety regulations in the laboratory

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Rajiv Gandhi University of Health Sciences

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

[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 Syphilis.

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

2. Sterilization by filtration.
3. Bacteriological analysis of milk
4. Laboratory diagnosis of mumps
5. Taeniasis.
6. Aspergillus fumigatus

Section B – Immunology and Molecular Biology [50 marks]

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

7. Define antigen and differentiate antigens from immunogens and haptens. Describe the characteristics of antigens and list types of antigens with examples.

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

8. Innate immunity
9. DNA probes
10. Restriction Fragment Length Polymorphism (RFLP)
11. Mucosal – associated lymphoid tissue
12. Flow cytometry.

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Rajiv Gandhi University of Health Sciences

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

[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 Leukaemia. Elaborate on French American British classification

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

2. Discuss the different methods employed for pregnancy test
3. Describe Erythropoiesis with neat diagrams
4. Comment on the principle, procedure and significance of alkali denaturation test
5. Explain the microscopic examination of CSF
6. Discuss the pathogenesis and clinical features of DIC

Section B - Immunology and Medical Genetics [50 Marks]

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

7. Define Anaphylaxis. Describe the mechanism of anaphylaxis with examples

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

8. Discuss the laws of inheritance
9. Describe the Immunology of AIDS
10. Enumerate immune deficiency disorders with brief notes
11. Comment on human genome project
12. Discuss the Immunological features of warm antibody diseases

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