21

SC—1733

SECOND YEAR B.Sc. (M.L.T.) DEGREE EXAMINATION, 2001

PATHOLOGY—II

Time : Three Hours | Maximum : 80 Marks

Your answers shall be specific to the questions asked.
Draw neat and labelled diagrams wherever necessary.

I. Long Essays : (Answer any *two*)

1 How do you organise and ensure quality control in Haematology laboratory ?

2 Explain the pathways of blood coagulation.

3 Explain the principles of electron microscopy and the technique of preparing slides for the same.

(2 × 10 = 20 marks)

II. Short Essays : (Answer any *eight*)

4 How do you operate tissue processor ?

5 Methods of sharpening the microtome knives.

6 Coomb's test and its significance.

7 Preparation of Leisuman stain.

8 Method of staining a paraffin section.

9 Technique of microphotography.

10 ICDs classification.

11 Reticulocyte count.

12 Vitamin B_{12} and folate assay.

13 Morphology and functions of lymphocyte.

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(8 × 5 = 40 marks)

III. Short Answers :

14 Morphology of L.E. cell.

15 Platelet functions.

16 Haptoglobin.

17 Selection criteria of paraffin.

18 Preparation of Eosin stain.

19 Type, percentage and the amount of anticoagulant used for ESR estimation.

20 Morphology of eosinophil.

21 Hb-F.

22 Cryostat.

23 Clotting time.

(10 × 2 = 20 marks)

20

SC—1734

SECOND YEAR B.Sc. (M.L.T.) DEGREE EXAMINATION, 2001

MICROBIOLOGY—II

Time : Three Hours | Maximum : 80 Marks

Your answers shall be specific to the questions asked.
Draw neat and labelled diagrams wherever necessary.

I. Long Essays : (Answer any *two*)

1. Describe the morphology cultural character pathogenicity and laboratory diagnosis of coryne bacterium diphtheriae.
2. Classify clostridium. Describe the laboratory diagnosis and prophylaxis of gas gangrene.
3. Describe the morphology, life cycle, pathogenicity and laboratory diagnosis of ancylostoma duodenale.

(2 × 10 = 20 marks)

II. Short Essays : (Answer any *eight*)

4. Staphylococcus aureus.
5. Anthrax.
6. V.D.R.L. test.
7. Laboratory diagnosis of meningits.
8. Pulmonary tuberculosis.
9. Plasmodium vivax.
10. Hymenolepis nana.
11. Trematode eggs.
12. Kala-azar.
13. Faeces in amoebic dysentry.

(8 × 5 = 40 marks)

III. Short Answers :

14. Nonbile stained ova.
15. Casoni test.
16. Blood smear examination for parasites.
17. Giardia intestinalis.
18. Acid fast stain.
19. Blood culture.
20. A.S.L.O. test.
21. Montoux test.
22. Micrococci.
23. Widal test.

(10 × 2 = 20 marks)

SC—1289

SECOND YEAR B.Sc. (M.L.T.) DEGREE EXAMINATION, 2001

BIOCHEMISTRY

Time : Three Hours | Maximum : 80 Marks

Your answer shall be specific to the question asked.
Draw neat and labelled diagrams wherever necessary.

I. Long Essays (Answer any *two*) :

1 What are Enzymes ? Explain the factors affecting rates of enzyme catalysed reactions.

2 Describe the digestion and absorption of carbohydrates from Gastrointestinal tract.

3 What is normal blood urea level ? How ammonia is converted to urea ?

(2 × 10 = 20 marks)

II. Short Essays (Answer any *eight*) :

4 What is meant by denaturation of proteins ? Name *four* denaturating agents.

5 Serum electrophoresis.

6 Essential amino acids.

7 Explain the amphibolic role of TCA cycle.

8 What is competitive inhibition ? What is its clinical application ?

9 Biological functions of Vitamin C.

10 Role of Vitamin A in visual cycle.

11 Spectrophotometer.

12 Isoenzymes.

13 How do you do G.T.T. ? Explain the different types of curves obtained.

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(8 × 5 = 40 marks)

III. Short Answers :

14 Provitamines of Vitamin D.

15 Scurvy.

16 Name the coenzymes forms Niacin.

17 Anticoagulants.

18 Benidicts test.

19 Standard curve.

20 Uses of water bath.

21 Significance of Km value.

22 Test for uric acid.

23 Limitations of Beer's law.

(10 × 2 = 20 marks)

23

SC—1288

SECOND YEAR B.SC. (M.L.T.) DEGREE EXAMINATION, 2001

MICROBIOLOGY—II

Time : Three Hours | Maximum : 80 Marks

Your answer shall be specific to the question asked.
Draw neat and labelled diagrams wherever necessary.

I. Long Essays. (Answer any *two*) :

1 Describe the laboratory diagnosis of enteric fever.

2 Classify mycobacteria and give a brief account of a typical mycobacteria.

3 Describe the morphology and life-cycle of taenia solium.

(2 × 10 = 20 marks)

II. Short Essays. (Answer any *eight*) :

4 Enterotoxins.

5 Trichomonas vaginalis.

6 Anthrax in man.

7 Mycoplasma.

8 Concentration techniques for eggs of parasites.

9 Nosocomial infection.

10 Prophylaxis against tetanus.

11 Cerebral malaria.

12 VDRL test.

13 Enterobins vermicularis.

(8 × 5 = 40 marks)

III. Short Answers. (Answer *all* questions) :

14 Dark field microscope.

15 Sterilization control.

16 Pre-erythrocytic cycle.

17 Enteropathogenic esch coli.

18 Coagulase test.

19 Castaneda method of blood culture.

20 C-reactive protein.

21 Filariform larvae.

22 Helicobater pylori.

23 Toxoplasma gondi.

(10 × 2 = 20 marks)



27

(Pages : 2) SC—1287

SECOND YEAR B.Sc. (M.L.T.) DEGREE EXAMINATION, 2001

PATHOLOGY—II (Theory)

Time : Three Hours Maximum : 80 Marks

Your answer shall be specific to the question asked.
Draw neat and labelled diagrams wherever necessary.

I. Long Essays. (Answer any *two*) :

1 What are the various components of a microscope. How do you take care of it ? How do you adjust the microscopic for (a) unstained preparations ; (b) stained preparations ; and (c) oil immersion examination ?

2 Write an essay on the uses of computer and its accessories in a laboratory.

3 What is a complete haemogram ? Describe in detail the methods of estimating erythrocyte sedimentation rate and packed cell volume of 4 blood sample.

(2 × 10 = 20 marks)

II. Short Essays. (Answer any *eight*) :

4 Instruments used in grossing speciments. List them and add a note on their uses.

5 Write a short note on the importance of record keeping in a laboratory.

6 Write a note on absolute eosinophi count, method of doing the count and its significance.

7 What is peroxidase staining of a peripheral blood smear ? Describe how it is done and why.

8 Name the common anticoagulants used in haematology with reference to particular investigations.

9 Write a short note on various microtomes.

10 Procedure of demonstration of L.E. cells.

11 Write a note on waste disposal in a laboratory.

12 Write a brief note on osmotic fragility test.

13 Write a brief note on polarising microscope.

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(8 × 5 = 40 marks)

III. Short Answers :

14 Name the haemoparasites.

15 Name the mountaints commonly used.

16 How do you do the test for sickling ?

17 What are the different bone marrow is aspiration needles ? Name the sites from which bone marrow is aspirated.

Turn over

18 List the precautions before drawing a blood sample.

19 How does an automatic tissue processor work ? How is it different from hand processing ?

20 Name the stains for fat.

21 Uses of electrophoresis in haematology.

22 What is supravital staining ? Name the dyes and where they are used.

23 Differences between thick and thin peripheral blood smears. Whar are their applications ?

(10 × 2 = 20 marks)