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Total No. of Pages : 1] **Code No.: RC-2933**

2nd B.Sc. MEDICAL LABORATORY TECHNOLOGY
EXAMINATION OF NOVEMBER 2003
PATHOLOGY II - THEORY PAPER (RS)

Time : 3 Hours] *[Max. Marks : 80*

I. ***Long Essays:*** *(Answer any two) :* [2x10=20]

1) Write an essay on Frozen section technique. Add a note on staining methods used for frozen sections. What are its applications ?
2) What are Anticoagulents ? How do they act ? How do you prepare oxalate, citrate & EDTA bulbs ? Where they are used ?
3) Write an essay on Automation in histopathology. Add a note on Automatic Slide Stainer.

II. ***Short Essays :*** *(Answer any eight) :* [8x5=40]

4) Methods of estimation of haemoglobin content of blood.
5) Write briefly about polarizing microscope and its uses.
6) Write briefly about screening and specific tests for Hemolytic Anaemias.
7) What are the methods of determining Bleeding time ? What is the normal value ?
8) What are the sites of aspiration of bone marrow ? How sternal puncture is done ?
9) Write briefly about principle and procedure of sickling test.
10) What are Romanowsky stains ? Give examples ? How do stain smear by Leishman's stain ?
11) Write briefly about study of Leukocyte alkaline phosphatase.
12) How do you establish quality control in hematology laboratory ?
13) Describe the morphology of different leukocytes with the help of neat diagrams. What are the causes of leukocytosis & leukopenia ?

III. ***Short Answers :*** [10x2=20]

14) How do you demonste fat in tissue ?
15) What is regressive staining ? Where it is done ?
16) What are the fixatives and embedding media used in electron microscopy.
17) Enumerate the tests used for identification of abnormal hemoglobins.
18) What is micrometry ? What are the types available ?
19) How do you check the accuracy of pipettes used in haematology ?
20) Name different clearing agents used in histopathology.
21) What fixative is used for mounting museum specimen ? How it is prepared?
22) Media used for temporary mounting of histopathology sections.
23) What are the types of knives used in histopathology ?

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Total No. of Pages : 1] **Code No.: RC-2934**

2nd B.Sc. MEDICAL LABORATORY TECHNOLOGY
EXAMINATION OF NOVEMBER 2003
MICROBIOLOGY II - THEORY PAPER (RS)

Time : 3 Hours] *[Max. Marks : 80*

N.B.:

1) *Your answers shall be specific to the questions.*
2) *Draw neat and labelled diagrams wherever necessary.*

I. ***Long Essays:*** *(Answer any two) :* [2x10=20]

1) Name the bacteria causing meningitis. Discuss the laboratory diagnosis of any one of them.
2) Describe the laboratory diagnosis of bacterial dysentery.
3) Describe the morphology, life cycle and laboratory diagnosis of plasmodium vivax.

II. ***Short Essays*** *: (Answer any eight) :* [8x5=40]

1) Sputum - concentration methods
2) Significant bateriuria
3) Cryptosporidium
4) Hydatid cyst
5) Poststreptococcal diseases
6) Negler's reaction
7) Elephantiasis
8) Widal test
9) Giardia Lamblia
10) Hospital infection

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III. ***Short Answers*** *: (Answer all questions)* [10x2=20]

1) Coagulase test
2) Lepromin test
3) N.N.N. medium
4) Larva migrans
5) Fusobacterium
6) Indole test
7) X and V factors
8) Relapsing fever
9) Enrichment media
10) Egg of Taenia

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2nd B.Sc. MEDICAL LABORATORY TECHNOLOGY
EXAMINATION OF NOVEMBER 2003
BIOCHEMISTRY II - THEORY PAPER (RS)

Time : 3 Hours] *[Max. Marks : 80*

I. ***Long Essays:*** *(Answer any two) :* [2x10=20]

1) Explain digestion and absorption of carbohydrates.
2) Classify proteins with examples. Mention four important functions of Plasma Albumin.
3) Explain the principle and uses of spectrophotometry.

II. ***Short Essays*** *: (Answer any eight) :* [8x5=40]

1) Electro phoresis
2) Iso enzymes
3) Flamephotometer
4) Role of Vit-A in Visual cycle
5) Function and dificency symptoms of Vit. C.
6) Benidictix test
7) Competitive Inhibition
8) Polysaccharides
9) Synthesis of creativine
10) Biological functions of Folic acid

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III. ***Short Answers*** *:* [10x2=20]

1) Name the two major hormones which regulates blood sugar level.
2) Jaffe's test
3) Coenzymes forms of
   (a) Thiamine (b) Niacin
   (c) Pyridoxin (d) Riboflavin
4) Primary structure of proteins
5) Write the composition of, indicating their linkage
   (a) Sucrose (b) Maltose
6) Normal blood urea level and its importance
7) Laws of absorption
8) Name fat soluble vitamins
9) Pellagra
10) Beri - Beri

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(Pages : 2)

RC—2599

SECOND YEAR B.Sc. (M.L.T.) DEGREE EXAMINATION, 2003

PATHOLOGY—II (Theory)

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* questions :

1 Describe the procedure of section cutting from paraffin block. What are the difficulties encountered ? Add a note on different types of microtomes.

2 What is the general principle of hemocytometry ? Describe the procedure of doing total WBC count. Add a note errors encountered in hemocytometry.

3 Write briefly about cleaning and preparation of glassware for hematological use. How do you check the accuracy and precision of pipettes.

(2 × 10 = 20 marks)

II. Short Essays. Answer any *eight* questions :

4 Methods of estimation of packed cell volume.

5 Write briefly about tissue processor.

6 What are the causes of dry tap ? What are the contraindications for bone-marrow aspiration ?

7 Methods of determining whole blood clotting time and its normal value.

8 Write a note on Nitroblue Tetrazolium test (NBT) and its significance.

9 What are different methods of ensuring quality control in hematology laboratory.

10 Write a note schilling test, how it is done and its significance ?

11 How do make thick and thin blood smears ? Describe Fields's rapid staining method.

12 Describe the normal morphology of red cell. What are different types of poikilocytes and their significance ?

13 How do you do reticulocyte count ? List the causes for increased and decreased count.

(8 × 5 = 40 marks)

III. Short Answers :

14 Name the tests for identification of haemoglobin-F.

15 Why accentuators are used in hematoxylin staining ?

16 What is the source of light in electron microscope ? What is its advantages ?

17 What are the special stain used for the demonstration of fat ?

18 What is progressive and regressive staining ? Give examples.

19 Name the embedding media used in electron microscopy.

Turn over

20 Name the tests used for detection of Fibrinogen Degradation Products (FDP).

21 What are the types of fibres you see in connective tissue and what special stain are used to demonstrate them ?

22 What types of jars are used for mounting museum specimens ?

23 How do you remove formalin pigment from tissue sections ?

(10 × 2 = 20 marks)

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RC—2600

SECOND YEAR B.Sc. (M.L.T.) DEGREE EXAMINATION, 2003

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* questions :

1. Classify streptococci and describe the pathogenesis and laboratory diagnosis of Streptococcal lesions.
2. Enumerate the organisms causing urinary tract infection outline the steps in the laboratory for diagnosis of a case of urinary tract infection.
3. Describe the morphology, life-cycle, pathogenicity of entamoeba histolytica.

(2 × 10 = 20 marks)

II. Short Essays. Answer any *eight* questions :

4 Atypical Mycobacterium.
5 Giardiasis.
6 Widal test.
7 Traveller's diarrhoea.
8 Immunisation against C. Diphtheria.
9 Satellitism.
10 Casoni's test.
11 Negler's reaction.
12 Microfilaria.
13 Standard tests for Syphilis.

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(8 × 5 = 40 marks)

III. Short Answers :

14 Congh plate.
15 B.C.G.
16 Quellung reaction.
17 Cyclops.
18 Armadillo.
19 Oxidase test.
20 Yaws.
21 Weil's disease.
22 Anaerobic media.
23 Egg of Trichuris Trichiura.

(10 × 2 = 20 marks)