

August, 2015

STATE MEDICAL FACULTY OF WEST BENGAL

**Final Examination For Diploma in Medical Laboratory Technology :
DMLT (Tech) Course**

PAPER – I : PATHOLOGY [Histopathology, Cytopathology & Blood Banking]

Time :2 Hours

Full Marks - 35

GROUP A : ANSWER ANY TWO OUT OF THE FOLLOWING 3 QUESTIONS:- {2X10=20}

Q1. How do you screen for donor of blood? Briefly state the procedure of blood collection?
What are the criteria for rejecting blood in the blood bank?

4+4+2 = 10

Q2. What is fixative? Name different types of fixatives. What are the advantages & disadvantages of Formalin fixative? Describe the preparation method of Formalin fixative.

2+3+3+2 = 10

Q3. What do you mean by FNAC and exfoliative cytology? Describe the procedure of FNAC Smear preparation and staining (by any one method). What are the cytological criteria of malignant cells?

2+5+3 = 10

GROUP B : WRITE SHORT NOTES ON ANY TWO OF THE FOLLOWING:- {2X5=10}

- A. Frozen Section.
- B. Disposal of Laboratory waste.
- C. Reverse Grouping.

GROUP C : PICK UP THE CORRECT ANSWER:- {5X1=5}

1. Commonly used fixative is:
 - a. 10% formalin
 - b. 20% formalin
 - c. 30% formalin
 - d. 40% formalin
2. ABO blood group system was first introduced by:
 - a. Coombs
 - b. Virchow
 - c. Landsteiner
 - d. Robert Koch
3. Decalcification of bone is done by:
 - a. Buins fluid
 - b. Zenker's fluid
 - c. Nitric Acid
 - d. Sulphuric Acid
4. Xylene is used as a:
 - a. Clearing agent
 - b. Fixative
 - c. Mounting media
 - d. None
5. PAP stain is commonly used to detect:
 - a. Malignant cells
 - b. Cytohormonal status
 - c. Both of them
 - d. None of them.

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**PAPER – II : MICROBIOLOGY
[Immunology & Serology, Parasitology, Mycology, Animal Care, Clinical
Microbiology, Virology]**

Time :2 Hours

Full Marks - 35

:GROUP A :

ANSWER ANY TWO OUT OF THE FOLLOWING 3 QUESTIONS:- {2X10=20}

- Q1. a) Name the causative agents causing Malaria in India.
b) Write down the name of the vector.
c) Write briefly on different parasitic form, present in the peripheral blood smear of Malignant Tertian Malaria with diagram. 2+1+7 = 10
- Q2. How will you plan to dispose the disposable syringe after taking blood from a patient with Jaundice? 10
- Q3. a) How will you prepare routine stool sample in laboratory?
b) Describe two Ova with diagram present in stool.
c) Name one cestode present in stool in man. 3+6+1 = 10

:GROUP B :

- Q4. Write Short Notes on (**Any Two**): 2x5 = 10
- a) Collection of Sheep blood
 - b) Negri bodies
 - c) Collection of samples from dermatophytosis

:GROUP C :

- Q5. Answer the following:- 5x1 = 5
- a) HBcAg is present in CSF/Serum/Hepatocytes/urine.
 - b) Infective form of cysticercosis is cysticercus cellulosae/cysticercus bovis/eggs of Taenia Solium/eggs of Taenia saginata.
 - c) True yeast is candida/Cryptococcus/aspergillus/histoplasma.
 - d) All are bile stained ova, except round worm/tape worm/hook worm/whip worm.
 - e) Trophozoite of giardia lamblia contains one/two/four/eight nucleus.

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**PAPER – III
BIOCHEMISTRY**

Time :3 Hours

Full Marks (Part-IIIA : 20 + Part-IIIB : 50)=70

Part IIIA and Part-IIIB are to be answered in separate Booklets

PART – III A

**[ELEMENTARY PRINCIPLES OF CHEMISTRY, PHYSICAL CHEMISTRY,
ORGANIC CHEMISTRY AND ELEMENTARY BIOCHEMISTRY]**

-:Attempt All Questions:-

Q1. a) What do you understand by the term "isoenzyme"? Describe the isoenzymes of Lactate Dehydrogenase in brief.

1+3 = 4

b) What are the components of Serum "Total Protein"? Give the normal value of total Protein and its components.

2+2 = 4

Q2. Write Short Notes on:-

3x2 = 6

- a) Jaffe's reaction
- b) Self monitoring of glucose
- c) Standard deviation

Q3. Write down the principle of ELISA. Give example of atleast two parameters done by this method. What is the importance of washing step in ELISA?

3+2+1 = 6

See overleaf

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**PAPER – III
BIOCHEMISTRY**

PART III B

[PRINCIPLES OF COMMON CLINICO-BIOCHEMICAL METHODS]

(Q1, Q2 & Q3 are Compulsory and Answer any Two from Q4, Q5 & Q6)

Q1. Comment on the following statements (True or False) : 5x1=5

- a) Benedict's test is a semi quantitative test.
- b) Amylase and lipase are good indicators of Liver function.
- c) Cerebrospinal fluid (CSF) is a straw coloured, turbid fluid.
- d) Blood samples should not be used for electrolyte estimation if fluoride is added in it.
- e) Fasting Blood Glucose is usually less than Post-Prandial (P.P.) blood glucose.

Q2. Write down the principle of Serum Urea estimation (any Standard Method). Mention the normal range of Serum Urea. What are the factors that influence blood level of urea? What is uremia?

4+1+4+1 = 10

Q3. Write down Short Notes (**any Three**):- 3x5 = 15

- a. Internal quality assurance.
- b. Comparison between automated and semi automated analyzer.
- c. Alkaline Phosphatase
- d. Thyroid function test

Q4. How do you estimate Serum Bilirubin? Which fraction of Bilirubin is raised in : Obstructive Jaundice; Hemolytic Jaundice? Mention the normal range of total Bilirubin and unconjugated Bilirubin.

6+2+2 = 10

Q5. Describe Benzidine test and mention its importance. What is the difference between urinary albumin and micro albumin? How do you estimate urinary Protein?

4+2+4 = 10

Q6. Write down the S.O.P. of cholesterol estimation. What is its clinical importance? Name the Lipoproteins present in blood.

6+2+2 = 10
