



## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – DMLT-2021/DMLT-2023/DMLT-2024

Course Name – Clinical Pathology & Basic Hematology

Course Code - DMLT102

( Semester I )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) For Glucose test which Vial is required ?
  - a) EDTA Vial
  - b) Citrate Vial
  - c) Fluoride Vial
  - d) No additive Vial
- (ii) Pre Heparinized syringe is used in which type of Collection?
  - a) Venous Blood Collection
  - b) Heel prick method
  - c) Arterial Blood Collection
  - d) Bone marrow sampling
- (iii) Choose the Objective lens used in Compound Microscope for Oil immersion method ?
  - a) 4x
  - b) 10x
  - c) 40x
  - d) 100x
- (iv) Which Anticoagulant is used Haemoglobin Estimation ?
  - a) 3.8% Tri Sodium Citrate
  - b) EDTA
  - c) Sodium oxalate
  - d) 3.2% Sodium Citrate
- (v) Cells like Blood, Sperm are counted in which type of Instrument?
  - a) CBC Analyzer
  - b) Colorimeter
  - c) Neubauer Chamber
  - d) Electrolyte Analyzer
- (vi) Which WBC is considered as the Largest Leukocyte
  - a) Lymphocyte
  - b) Neutrophil
  - c) Monocyte
  - d) Basophil
- (vii) A Patient may be interpreted as "Oliguria" when there is
  - a) Decrease in urine volume < 2500 ml/24 hrs
  - b) Complete suppression of urine formation as in renal failure
  - c) Decrease in urine volume < 1000 ml/24 hrs
  - d) Abnormal increase in urine volume > 2.500 ml/24 hrs
- (viii) Most of the volume of normal human blood is composed of :
  - a) Red cells
  - b) Hemoglobin

- c) Plasma  
(ix) Which Anticoagulant is used for LFT, KFT & Lipid Profile?  
a) Trisodium Citrate  
c) Sodium Fluoride  
(x) Glycosuria is related to  
a) Presence of Glycogen in urine  
c) Presence of Sugar in Urine  
(xi) The presence of which type of cells in urine sediment is suggestive of a urinary tract infection (UTI)?  
a) Epithelial cells  
c) Leukocytes  
(xii) Which of the following microscopic findings in urine may indicate renal damage or glomerular disease?  
a) Hyaline casts  
c) Squamous epithelial cells  
(xiii) What is the term for the procedure in which a needle is inserted into the pleural cavity to remove excess pleural fluid for diagnostic or therapeutic purposes?  
a) Pleurodesis  
c) Pleurocentesis  
(xiv) Acrosomal cap of Semen is associated with the secretion of  
a) Hydrolytic enzyme  
c) fusing enzyme  
(xv) The clinical procedure applied for the collection of Ascitic fluid can be experimented by  
a) Paracentesis  
c) Peritocentesis  
d) White cells  
b) EDTA  
d) No Additive  
b) Excess Glomerular filtration rate  
d) Presence of Glycolate crystal  
b) Erythrocytes  
d) Squamous cells  
b) Waxy casts  
d) Urate crystals  
b) Thoracentesis  
d) Pleural Biopsy  
b) Proteolytic enzyme  
d) Antibodies  
b) Pleurocentesis  
d) Thoracentesis

#### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Describe the role of liquifaction in semen analysis. How long does it usually take for semen to liquify, and what might delayed liquifaction indicate? (3)
3. List the utility of Phlebotomy. (3)
4. Write short notes about Erythropoiesis. (3)
5. How would you differentiate Casts found in Urinary specimen on the basis of diseases? Compare with diagrammatic representation. (3)
6. How is sperm motility typically assessed, and what are the reference values for normal motility? (3)

OR

A patient is interpreted with Renal disease, correlate with different test parameters of Urine to confirm the disease condition. (3)

#### Group-C

(Long Answer Type Questions)

5 x 6=30

7. Prepare a list of different types of Blood Cells. Mention the function of each of them. (5)
8. A Urine specimen is received to perform Urine M/E. What does it stand for? How would you perform the procedure? Categorize findings of M/E. (5)
9. Describe the composition of amniotic fluid and its importance in fetal development. What are the parameters assessed in Laboratory. (5)
10. A patient is interpreted with Diabetes Mellitus, Correlate with different parameters to confirm this disease condition. (5)
11. Describe the different type of Vials used for Clinical testing and mention their utility. (5)

12. Demonstrate the structure of Normal Semen and label different parts . Mention the function of all parts. (5)

OR

Write the principle of Sperm Count. In which method the Counting of Semen may be assessed? (5)

\*\*\*\*\*

LIBRARY  
Brainware University  
Barasat, Kolkata -700125