



BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – DMLT-2023
Course Name – Hematology
Course Code - DMLT202
(Semester II)

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

- Choose the correct alternative from the following:
- (i) Which Vial is used for routine Haematological Investigation?

a) EDTA Vial

b) Fluoride Vial

c) Oxalate Vial

d) Citrate Vial

- (ii) Black colour Vial is associated with
 - a) ESR Estimation

b) Hb Estimation

c) TC/DC

- d) Coagulation studies
- (iii) Which Anticoagulants used for determination of Rouleaux formation
 - a) EDTA

b) 3.2% Sodim Citrate Vial

c) 3.8% Trisodium Citrate a bare \$ 120 ting E 120 to

- d) Heparin Vial
- (iv) Which Anticoagulants used for determination of Clotting Time
 - a) EDTA

b) 3.2% Sodim Citrate Vial

c) 3.8% Trisodium Citrate 199 woo boa yeels

- d) Heparin Vial
- (v) Choose The length of westergren pipette
 - a) 30 mm

b) 100 mm

c) 200 mm

- d) 300 mm
- (vi) The average volume of a single red cell expressed in cubic micrometer is called
 - a) MCV

b) МСН

c) MCHC

- d) HCT
- (vii) What is the purpose of using a coverslip when counting cells with a hemocytometer?
 - a) To prevent contamination of the sample
- b) To protect the hemocytometer from damage
- c) To keep the sample from evaporating
- d) To create a uniform depth for viewing the sample
- (viii) What is the purpose of a hemoglobinometer?

| a) To measure the number of red blood cells in a blood sample | b) To measure the concentration of hemoglobin in a blood sampled) To measure the volume of packed red blood |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| c) To count the number of white blood cells in a blood sample (ix) A Patient may be interpreted as Leukocytopenia, | cells in a blood sample |
| a) Abnormal increase of Erythrocytes c) Abnormal increase of Leukocytes (x) Identify the bi-lobed orange coloured coarse gran | d) Abnormal decrease of White Blood Cell d) Abnormal increase of Platelets |
| a) Neutrophil c) Basophil (xi) Select which anemia MCV, MCH, & MCHC remain | b) Eosinophild) Lymphocyte |
| a) Microcytic Anemia c) Hemolytic anemia (xii) Choose the physiological condition where the ref | b) Macrocytic Anemiad) Normocytic Anemia |
| a) Necrosis c) Hypoxia (xiii) Choose the unit considered for Reticulocyte Cou | b) Hyperoxia d) Leucocytopenia nt |
| a) no. of cells/cummc) pictogram(xiv) What is the major site of red cell destruction is | b) percentage d) g% |
| a) Liverc) Bone Marrow(xv) Which blood elements are included in a CBC test | |
| a) TPC c) RDW | b) Hb Estimation d) All of these |
| Grou (Short Answer T | 0 5 45 |
| | Blood Cells. (3) |
| 2. Illustrate different abnormal morphologies of Red Blood Cells.3. What do you mean by Total Leukocyte Count? Mention the normal result of TLC. | |
| 4. List different stains associated with Blood Smear St microscopical analysis? | tion the normal result of TLC. (3) aining. How would you Stain a smear for (3) |
| 5. Enumerate the causes of Anemia & Polycythemia.6. Compare and contrast between the parameters of | (3) BSL 3 and BSL 4 and comment on their (3) |
| effectivity. | NR CONTRACTOR OF THE CONTRACTO |
| Describe the hierarchy of controls in occupational s | 5.5W ₁ |
| Gro | up-C |
| (Long Answer T | |
| 7. Prepare a chart representing all the Vials used in Canticoagulants, mechanism and Uses. | Clinical Laboratory on the basis of the (5) |
| 8. Discuss about the biological calibration method o | |
| Select and explain the key steps involved in prepa blood smear. | |
| 10. Describe the types of disposal containers for labo | 그는 그들이 그렇다는 아이들이 그렇게 되었다면 하는 사람이 되었다. |
| 11. List different types of Anemia and correlate with t | |
| 12. Describe the clinical significance of a low mean continuous interpretation of red cell indices. Provide example | Orpuscular volume (MCV) in the (5) |

anemia.

OR

Discuss the clinical significance of a high mean corpuscular hemoglobin (MCH) in the interpretation of red cell indices. Provide examples of conditions associated with macrocytic anemia. (5)
