

**BV (3/CBCS)/MLT/MDT-VC-3036**

**2023**

**MEDICAL LABORATORY TECHNICIAN /  
MEDICAL LAB AND MOLECULAR  
DIAGNOSTIC TECHNOLOGY**

**QP : Medical Laboratory Technician**

**Paper : MLT/MDT-VC-3036**

**( PATHOLOGY—III )**

**Full Marks : 60**

**Time : 3 hours**

*The figures in the margin indicate full marks  
for the questions*

**1. Fill in the blanks :**  $1 \times 7 = 7$

(a) \_\_\_\_\_ is routinely used fixative in histopathology lab.

(b) PCV is increased in \_\_\_\_\_ anaemia.

(c) Iron is stored as \_\_\_\_\_ in the body.

(d) Active form of vitamin B<sub>12</sub> is \_\_\_\_\_.

(e) Paraffin wax is used as \_\_\_\_\_ in the histopathology lab.

(f) The full form of RDW is \_\_\_\_\_.

(g) \_\_\_\_\_ are increased in acute bacterial infection.

2. Answer the following questions :

2x4=8

(a) What do you mean by anisocytosis and poikilocytosis? Give example.

(b) What is compensatory erythropoiesis?

(c) Which blood cells are affected in pancytopenia?

(d) What are the characteristics of ideal fixative?

3. Answer any three of the following questions :

5x3=15

(a) Write about the pathophysiologic classification of anaemia.

(b) Write a note on iron absorption.

(c) List out the tests for increased red cell destruction and increased red cell production.

( 3 )

- (d) Write a note on grossing.
- (e) Write a note on the functions of platelets.

4. Answer the following questions :

- (a) Write a note on the formation of haemoglobin. How will you explain about the pathologic variation of WBC? 10×3=30
- 4+6

**OR**

Write down the clinical significance of iron deficiency anaemia. How will you investigate iron deficiency anaemia in the laboratory?

4+6

- (b) Write about the biochemical basis of megaloblastic anaemia. Explain briefly about vitamin B<sub>12</sub> and Folic acid metabolism.

4+6

**OR**

Write down the basic principle behind tissue processing. Explain various steps along with chemicals involved.

4+6

( 4 )

(c) Which type of anaemia has defects in their globin chain? Explain briefly.

OR

What are formed elements? Explain in detail about reticulocyte count.

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