

(4)

15. Discuss the working principle of Coulter counting chamber along with coincidence phenomenon and the application of floating calibrator. Diagrammatically represent FACS with the significance of FSC and SSC. 5+3
16. Write the principle and procedure of DAT. How does EDTA act as anticoagulant? 8

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Total Pages—04

PG/2nd Sem/BML-202/24

2024

M.Sc. 2nd Semester Examination

**BIOMEDICAL LABORATORY SCIENCE
AND MANAGEMENT**

PAPER : BML-202

Full Marks : 40

Time : 2 hours

The figures in the right-hand margin indicate marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Illustrate the answers wherever necessary.

GROUP—A

Answer *any four* of the following questions :

2×4=8

1. Differentiate poikilocytes and anisocytes.
2. Define pO_2 and P^{50} value.
3. What do you mean by H antigen?

(2)

4. What are the types of anticoagulant-preservatives used in blood bank for different duration of storage?
5. Briefly state about the hemoglobin chains formed during early stages before birth with mentioning of the prenatal age of these chains.
6. What is APTT?

GROUP—B

Answer *any four* of the following questions :

4×4

7. Discuss briefly about the pathophysiology of G-6 PD deficiency along with its detection principle of Bentler spot test. 4
8. Discuss the tertiary and quaternary structure of hemoglobin. 4
9. Classify Leukemia. State the blood cell features of acute lymphocytic leukemia-L1. 2+2

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(Continued)

(3)

10. What is the significance of Leukocyte reduced blood cells for blood transfusion? Define apheresis. 2+2
11. Discuss about genetic orientation of Hb chain β -thalassaemia major, intermedia and minor. State briefly the molecular basis of sickle cell anaemia. 2+2
12. What is Kernicterus? Write its pathological symptoms. 2+2

GROUP—C

Answer *any two* of the following questions :

8×2=16

13. Discuss about the biochemical basis of different blood group antigens with diagram. What is the pathophysiological aspect of Bombay 'O' antigen? 6+2
14. Describe different types of abnormal red cell morphology with diagram and its clinical significance. 8

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(Turn Over)