

2019

MSc

2nd Semester Examination

Bio Medical Laboratory Science & Management (Theory)

PAPER – BML-202

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

(Turn Over)

Group A

1. Answer any four of the following : 4×2=8

- a) what is apheresis?
- b) Why is EDTA used as preservative in blood?
- c) What is thrombocytopenia?
- d) Define poikilocytosis.
- e) Name any two fluorescent dyes used in haematological automation.
- f) State how many amino acids and what types of chain are present in HbA₂.
- g) What is MCH?
- h) What is Kernicterus?

Group B

2. Answer any four of the following : 4×4=16

- a) Discuss the pathophysiology of HDN. 4
- b) What is beutler fluorescent test?
State any two haematological features seen in G-6PD deficiency anaemia. 2+2
- c) Enumerate your idea about Feisher Race and Wiener nomenclature. 4
- d) State the consequence of different blood disorders on osmotic fragility. Discuss in brief how the test is performed. 2 + 2
- e) What are the strategies to reduce the chances of transfusion transmitted infections? 4
- f) Define cryoprecipitate. Briefly state how you will prepare platelet rich plasma. 2 + 2

- g) How do you separate different forms of haemoglobin by cellulose acetate electrophoresis? 4
- h) Discuss about different types of blood collection bag and preservatives used in blood banking. 4

Group C

3. **Answer any two of the following :** **2×8=16**
- a) State the basic principle of Coulter counter. What is coincidence of phenomenon?
Diagrammatically describe the working principle of FACS. 2+2+4
- b) Draw the diagram of following red cell abnormalities mentioning its clinical significance: Target Cell, basophilic stippling, Howell Jolly body, Rouleaux formation. Why does HbF require low p_{50} of O_2 for the survival of foetus? Diagrammatically show the transition of T-form of Hb to R-form of Hb. 4+2+2
- c) Write short notes (any two): 4+4=8
- PNH
 - Thalassaemia
 - Hemophilia
 - Bombay 'O' blood group
- d) Describe the intrinsic pathway of blood coagulation? State briefly the sucrose lysis test for PNH detection. 4+4=8