PG/IIS/BML/202/23

M.Sc. 2nd Semester Examination, 2023

BIO-MEDICAL LABORATORY SCIENCE AND MANAGEMENT

PAPER – BML-202

Full Marks : 50

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

GROUP – A

Answer any **four** questions : 2×4

1. Write the world wide percentage of distribution of ABO blood group.

2. Define P_{50} value.

3. Define myelogenous leukemia.

4. Name the preservatives used in blood bank.

5. What is prothrombin time ?

6. What is clot retraction ?

GROUP – B

Answer any **four** questions : 4×4

7. Illustrate the pathological states regarding the presence of Heinz bodies, Howell-Jolly bodies, target cells, spherocytosis with diagramatic representation. 4

8. Define alloantibodies and autoantibodies. What is G-6-PD deficiency ? $2 + 2$

9. Why does HbF need low Po_2 then that of HbA for its O_2 saturation ? 4

10. How do you prepare fresh frozen plasma and cryo precipitate, in blood bank ? Define 'Apheresis'. $3 + 1$

11. Write the significance of SSC and FSC in FACS. What is 'phenomenon of coincidence' ? 2 + 2

12. Discuss about the classification of thalassemia on the basis of its Hb gene variants. 4

GROUP – C

Answer any **two** questions : 8 × 2

13. Discuss the pathophysiology and clinical features of sickle cell anaemia with special reference to its genetical and molecular aspects. Name the different techniques of its detection. 6 + 2

14. Enumerate the structural features of H antigen and blood group-A & B antigen with diagram. What is Bombay O group ? 6 + 2

15. Define Hydrops fetalis. Write a short note on haemophilia. Briefly discuss the causes of HDN. 2 + 3 + 3

16. Discuss the intrinsic pathway of blood coagulation. Define PCV. How does heparin act as anticoagulant ? 4 + 2 + 2

[Internal Assessment – 10 Marks]