



PG CBCS
M.Sc. Semester- IV Examination, 2023
MEDICAL LABORATORY TECHNOLOGY
PAPER: MLT 402C
(ADVANCE HAEMATOLOGY & IMMUNO HAEMATOLOGY)

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.

GROUP – A

Answer any **FOUR** of the following questions: 4×2=8

1. Write the cause of Hemophilia B and Hemophilia C.
2. Define alloantibodies.
3. Write the full form of TRALI and TACO.
4. Name the methods of HLA typing.
5. What do you mean by delayed and acute hemolytic reactions?
6. What do you mean by 'non-haemolytic febrile reactions'?

GROUP – B

Answer any **FOUR** of the following questions: 4×4=16

7. Write the role of ADAMTS13 in thrombotic thrombocytopenic purpura. What do you mean by primary and secondary immune thrombocytopenic purpura? 2+2
8. Write the Coulter principle of electrical-Impedance cell counting. What is floating calibrator? 3+1
9. What laboratory tests are to be done when transfusion reaction occurs?
Write the significance of human leucocyte antigen (HLA) typing. 2+2
10. What do you mean by transfusion-associated graft-vs-host disease (GvHD)?
Write the complications associated with massive blood transfusion. 2+2
11. State principle of hydrodynamic focusing in Flow cytometry.
What is Gating?
12. Describe the mode of action of warfarin. What is Ro Sublype? 2+2

GROUP – C

Answer any **TWO** of the following questions: 4×4=16

13. Write the pathophysiology of "Disseminated Intravascular Coagulation". Write the clinical significance of direct and indirect antiglobulin test. 4+4
14. Describe the Three-Part and Five-Part techniques for counting white blood cells.
Write the process of differential determination of 'Mature and Immature Platelets.' 5+3

(P.T.O)

15. Write about the structural orientation of H antigen, A-antigen and B antigen and on red cell surface. Draw your idea about Bombay "O" blood group with special reference to the role of fucosyl transferase. 5+3
16. Describe the donor Screening process in brief. Mention different types of blood bags. Write the composition of anticoagulant and preservative solutions. 4+2+2


