

IMMUNOHEMATOLOGY AND TRANSFUSION MEDICINE

PAPER – I

Time :3 hours
Max. Marks :100

IMHT/D/10/15/I

Attempt all questions in order.
Each question carries 10 marks.

Write short notes on:

1. Factors affecting antigen antibody reaction.
2. Lymphocyte subsets and their role in immune response.
3. Anemia of chronic renal failure
4. Synthesis of ATP and its significance in storage of blood.
5. Draw platelet structure and discuss its role in homeostasis.
6. Soluble transferrin receptors and their role in blood donor selection.
7. Laboratory diagnosis of G6PD deficiency.
8. Define and classify cytokines. Discuss their role in febrile non hemolytic transfusion reaction.
9. Mendelian theory of inheritance.
10. Methods of blood volume determination.

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PAPER – II

Time :3 hours
Max. Marks :100

IMHT/D/10/15/II

Attempt all questions in order.
Each question carries 10 marks

Write short notes on:

1. High titer and low avidity antibody.
2. Pathogenesis of drug induced autoimmune hemolytic anemia.
3. Passenger lymphocyte syndrome.
4. Role of blood groups in paternity testing.
5. Elements of quality system in Immuno-hematology Laboratory.
6. Acquired B Phenomenon
7. Pathogenesis of TRALI and critically evaluate strategies available for the prevention of this condition.
8. What is 'Rare Blood Donor'? Describe what factors you would take into account while establishing rare donor registry in India?
9. Molecular methods for HLA typing
10. Bombay phenotype.

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PAPER – III

Time :3 hours
Max. Marks :100

IMHT/D/10/15/III

**Attempt all questions in order.
Each question carries 10 marks.**

Write short notes on:

1. Red cell exchange in Sickle cell disease.
2. What do you mean by "Near Miss events"? Discuss various measures that can be taken to prevent incorrect blood component transfusion.
3. Discuss various strategies to decrease donor exposure in neonates.
4. "Directed donation should be discouraged". Comment on this statement with reasons.
5. Fibrin sealants.
6. How will you ensure quality of blood collected during outdoor blood donation camps?
7. Transfusion support in patients undergoing orthotopic liver transplantation.
8. Challenges of world wide travel to a safe blood supply and describe various strategies to minimize the risk.
9. Causes for decreased transfusion interval in a thalassemia major patient. How will you investigate and manage such case.
10. Hospital Transfusion Committee.

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PAPER – IV

Time :3 hours
Max. Marks :100

IMHT/D/10/15/IV

Attempt all questions in order.
Each question carries 10 marks.

Write short notes on:

1. Platelet substitutes.
2. RFID in blood banking.
3. Recombinant erythropoietin.
4. Platelet gel and its applications.
5. Photopheresis and its applications.
6. Emerging infections threatening safety of blood supply in India.
7. Methods for evaluation of platelet function defects.
8. Discuss various points of care tests to reduce transfusion requirements in elective surgery.
9. Molecular typing of blood groups.
10. Molecular structure, detection and significance of HBV mutants in blood banking.