

**IMMUNOHAEMATOLOGY & BLOOD TRANSFUSION**

**PAPER-I**

IMBT/D/18/15/I

Time: 3 hours  
Max. Marks:100

**Important Instructions:**

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

**Write short notes on:**

1. Platelet antigens and their significance in platelet transfusions. 5+5
2. Glycophorin associated blood group system. 10
3. a) Recombinant DNA technology. 5+5  
b) Its role in transfusion medicine.
4. a) Pathophysiology of sickle cell anaemia. 5+5  
b) Optimum transfusion support in such patients.
5. a) What are monoclonal antibodies? 3+7  
b) Discuss their applications in transfusion medicine.
6. a) Zeta potential. 3+7  
b) Role of different potentiators in red cell Antigen Antibody Reactions.
7. Role of HLA in solid organ and bone marrow transplantation. 10
8. a) Describe hemoglobin structure. 5+5  
b) What factors affect the Hemoglobin-Oxygen Dissociation curve?
9. Discuss immunodeficiency syndromes in brief and their effect on blood bank testing. 10
10. Different types of ELISA and their advantages/disadvantages. 10

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