

IMMUNO HAEMATOLOGY AND BLOOD TRANSFUSION**PAPER-I**Time: 3 hours
Max. Marks:100

IHBT/D/20/15/I

Important Instructions:

- **You are provided with 5 answer sheet booklets. Each individual answer sheet booklet consists of 10 pages excluding the covering jackets.**
- **Answers to all the questions must be attempted within these 5 answer sheet booklets which must be later tagged together at the end of the exam.**
- **No additional supplementary answer sheet booklet will be provided.**
- *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. What is 'Zeta potential'? Discuss its applied aspects in red cell serology. 4+6
2. Discuss sex linked inheritance pattern in blood groups. Enumerate suitable examples. 6+4
3. Role of platelets in hemostasis. 10
4. Characterization & clinical application of mesenchymal stem cells. 5+5
5. Molecular blood grouping- Application & techniques. 5+5
6. Describe the functions of cytokines. Enumerate their role in transfusion medicine. 5+5
7. Evolution of platelet additive solutions and its significance in platelet transfusion. 5+5
8. Iron toxicity and its management in multiply transfused patients. 5+5
9. Discuss the parameters involved in sample size calculation. Add a note on multivariate analysis and softwares available to aid research methodology. 4+3+3
10. Classify hemolytic anaemia. Elaborate on the genetics basis of beta thalassaemia. 4+6
