

**IMMUNO-HEMATOLOGY & TRANSFUSION MEDICINE**  
**PAPER-I**

IHTM /D/17/15/I

TIME : 3 HOURS  
MAX. MARKS : 100

- 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 question 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.  | a. Regulatory T cells (Tregs)  | 5+5   |
|     | b. Their role in Immune Tolerance  |       |
| 2.  | a. Describe pathophysiology of shock.  | 5+5   |
|     | b. Describe roles of various expanders.  |       |
| 3.  | a. Iron metabolism in healthy individual                                       | 5+5   |
|     | b. Biochemical markers of iron deficiency                                      |       |
| 4.  | a. Molecular structure of Hepatitis B virus (HBV)                              |       |
|     | b. Importance of HBV mutants in transfusion medicine                           | 5+5   |
| 5.  | a. Membrane attack complex (MAC) in complement activation                      | 5+5   |
|     | b. Antibody mediated hyperacute rejection of solid organ transplant            |       |
| 6.  | a. Schematic illustration of common inheritance patterns                       | 5+5   |
|     | b. General properties of Autosomal Recessive disorders                         |       |
| 7.  | a. Mechanism of fibrinolysis   | 5+5   |
|     | b. Natural anticoagulants  |       |
| 8.  | a. Types of Hypersensitivity reactions   |       |
|     | b. Applied aspects of Type I hypersensitivity reaction in Transfusion Medicine | 5+5   |
| 9.  | a. Laboratory diagnosis of G6PD deficiency                                     | 5+5   |
|     | b. Applied aspects in Transfusion Medicine                                     |       |
| 10. | a. What is reticulated platelet?   | 2+3+5 |
|     | b. Describe methods of its detection.  |       |
|     | c. Its relevance in Transfusion Medicine                                       |       |

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