IMMUNOHEMATOLOGY & TRANSFUSION MEDICINE

PAPER - 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. a) Describe origin and differentiation of hematopoietic cells. 5+5
   b) Classify anemia according to underlying mechanisms.

2. a) Complement cascade in health. 5+5
   b) Mechanism of complement mediated hemolysis.

3. a) Give schematic illustration of common inheritance patterns. 5+5
   b) Describe general properties of autosomal recessive disorders.

4. a) Human neutrophil antigen (HNA) system. 5+5
   b) Role of HNA antibodies in adverse effects of transfusion.

5. a) Pathogenesis of different types of shock. 5+5
   b) Role of plasma volume expanders in hypovolemic shock.

6. a) CFU - assay. 5+5
   b) F VIII : structure and function.

7. a) Describe anticoagulant and preservative solution for red cells. 5+5
   b) Discuss clinical consequences of red cell storage lesions.

8. a) Hypersensitivity reactions. 5+5
    b) Role of Type I hypersensitivity in transfusion reaction.

9. Biowaste management in blood banks. 10

10. a) Give schematic illustration of synthesis of ABH antigens: 5+5
    b) Discuss molecular basis of Bombay Phenotype.