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) Human Neutrophil Antigen (HNA) System.
   b) Role of HNA antibodies in adverse effects of transfusion.
   5+5

2. a) Schematic illustration of common inheritance patterns.
   b) General properties of autosomal recessive disorders.
   5+5

3. a) Schematic illustration of structure of red cell membrane.
   b) Role of red cell membrane in health and disease.
   5+5

4. a) Normal coagulation pathway.
   b) Laboratory investigations in bleeding disorders.
   5+5

5. a) Various subsets of lymphocytes.
   b) Role of T lymphocytes in cell mediated immunity.
   5+5

6. a) Pathogenesis of different types of shock.
   b) Enumerate various plasma expanders.
   c) Role of plasma expanders in hypovolemic shock.
   2+3+5

7. a) Synthesis of antigens of ABO Blood group system.
   b) Molecular basis of Bombay phenotype.
   5+5

8. a) Molecular structure of HIV 1 & 2 viruses using diagram(s).
   b) Correlate the same to evolution of screening tests of HIV virus.
   5+5

9. a) Define cytokines.
    b) Describe their functions.
    c) Describe the role of cytokines in transfusion medicine.
    2+3+5

10. a) Iron metabolism in health.
    b) Laboratory diagnosis of iron deficiency anaemia in blood donors.
    5+5

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POSSESSION / USE OF CELL PHONES OR ANY SUCH ELECTRONIC GADGETS IS NOT PERMITTED INSIDE THE EXAMINATION HALL.