IMMUNOHEMATOLOGY & TRANSFUSION MEDICINE

PAPER – I

IMHT/D/14/15/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. a) Human Neutrophil Antigen (HNA) System. 5+5
   b) Role of HNA antibodies in adverse effects of transfusion.

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

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

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

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

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

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

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

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

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

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