

IMMUNOHEMATOLOGY AND BLOOD TRANSFUSION
PAPER-ITime: 3 hours
Max. Marks:100

IMHT/J/20/15/I

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. Describe the various sub-types of lymphocytes and discuss the role of T lymphocytes in Transfusion Medicine. 5+5
2. Define platelet storage lesions, its clinical significance and discuss various preventive measures for platelets storage lesions. 2+4+4
3. Draw coagulation cascade and discuss cellular model of coagulation. 5+5
4. Describe the synthesis of antigens of ABO Blood group system and molecular basis of Bombay phenotype. 5+5
5. a) Major Histocompatibility Complex. 5+5
b) Role of HLA in transfusion medicine.
6. a) Describe the role of Heparin in iron metabolism. 5+5
b) Discuss its application in diagnosis of iron deficiency anemia.
7. a) Define apoptosis. 2+3+5
b) Briefly describe method of detection of apoptosis.
c) Discuss applied aspects of apoptosis in stored platelet components.
8. a) What is randomized control trial? 2+3+5
b) Types of RCTs.
c) Plan RCT on use of calcium supplementation for prevention of hypocalcaemia in apheresis donors.
9. a) Principle of polymerase chain reaction. 5+5
b) Its application in transfusion medicine.
10. Types of hypersensitivity reactions and their implication in blood transfusion. 5+5
