

IMMUNOHEMATOLOGY & TRANSFUSION MEDICINE

PAPER - IV

IMHT/D/13/15/IV

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.

1. a) Describe the principle of microarray technology. 5+5
b) Discuss its applications in Transfusion Medicine.
2. a) What is stem cell plasticity? 5+5
b) How this property of stem cells is being used in regenerative medicine?
3. a) What do you mean by Installation Qualification (IQ), Operational Qualification (OQ) and Performance Qualification (PQ)? 6+4
b) Discuss their importance in relation to quality management system (QMS).
4. Discuss measures adopted by blood transfusion services to minimize the risk of transfusion transmitted infections. 10
5. Draft guidelines for hospital blood bank to ensure that at each stage of the transfusion process: sample collection, testing, cross-matching, issue of blood to the ward and transfusion; the correct patient is identified and transfusion mismatch avoided. 10
6. a) Describe emerging infections that are threatening blood safety in India. 5+5
b) What factors would you consider prior to implementing a screening test for these infections on all blood donations?
7. In your hospital, over the past few months there have been a number of occasions where elective operations had to be postponed due to shortage of blood. Describe the actions you would take to overcome this problem. 10
8. Discuss rationale of therapeutic plasma exchange in the following conditions: 5+5
a) T.T.P
b) Myasthenia gravis
9. a) Discuss commercially available plasma derivatives used in clinical practice. 6+4
b) List the indications for intravenous immunoglobulins (IVIg).
10. a) What is transgenic animal? 5+5
b) Describe how these animals are having therapeutic implications in clinical conditions.
