

IMMUNO-HEMATOLOGY & TRANSFUSION MEDICINE
PAPER-IV

IHTM/D/17/15 /IV

TIME : 3 HOURS

MAX. MARKS : 100

- 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 question to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write Short notes on:

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|-----|---|-------|
| 1. | a. Chimeric Antigen Receptor (CAR) T cell
b. Discuss CAR-T cell therapy | 5+5 |
| 2. | a. Principle of Extra corporeal photopheresis
b. Discuss its clinical applications | 5+5 |
| 3. | a. Define micro-chimerism
b. Describe methods of detection of micro chimerism
c. Discuss significance in organ transplantation | 2+4+4 |
| 4. | Describe various assays to test hemolytic potential of red cell alloantibodies. | 10 |
| 5. | a. What is "Residual Risk" in relation to microbiological screening of the blood supply?
b. Describe various measures which may be taken to reduce the residual risk of transfusion transmitted infections in India. | 3+7 |
| 6. | Discuss applications of molecular typing of blood group antigens. | 10 |
| 7. | a. Discuss rationale and indications of red cell exchange in Sickle cell disease
b. Discuss transfusion support in a patient with Sickle cell disease | 5+5 |
| 8. | a. Stem cell plasticity
b. Induced pluripotent stem cells. | 5+5 |
| 9. | a. Minor ABO incompatible Bone Marrow/ peripheral blood stem cell transplant
b. Enumerate complications
c. Management of complications and transfusion support | 3+3+4 |
| 10. | a. "Near Miss Events"
b. Discuss causes and prevention of Near Miss Events | 3+7 |
