IMMUNOHEMATOLOGY & TRANSFUSION MEDICINE

PAPER - II

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) Molecular structure of Rh gene.
   b) Molecular mechanisms responsible for Rh D negative phenotype.
   5+5

2. Describe techniques for detection of HLA antibodies and discuss clinical significance of these antibodies in Transfusion Medicine.
   5+5

3. Give an account of the criteria for selection and purchase of the following in blood bank:-
   a) Anti-D Antisera
   b) AHG reagent for cross matching
   5+5

4. Discuss various factors to be considered for optimal transfusion management of a patient dependent on long term transfusion support.
   10

5. a) Discuss the abnormalities encountered in expression of ABH antigens giving rise to ABO blood group discrepancies.
   b) Draft a protocol for resolution of ABO discrepancies at your hospital.
   5+5

6. Discuss various clinical and laboratory factors to be considered in detection and identification of red cell antibodies in a transfused patient.
   10

7. a) Enumerate indications for Rhlg administration.
    b) What is the mechanism of action of Rhlg?
    c) Draft a decision flow chart for post partum administration of Rhlg at your hospital.
    2+3+5

8. a) Discuss ABO compatibility in relation to platelet transfusion and its clinical implications.
    b) What measures can be taken to prevent immune hemolytic reaction after ABO incompatible platelet transfusion?
    5+5

9. a) What are cold reactive autoantibodies?
    b) What lab tests are affected by these auto-antibodies and how to resolve such problems?
    c) Compare and contrast normal (harmless) cold autoantibodies and pathological (harmful) cold autoantibodies.
    2+3+5

10. a) HLA antibodies
    b) Monoclonal antibodies
    5+5

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