

**RAN-2406121601010502****M.D. (Immuno Haematology and Blood Transfusion)****Examination September - 2025****Paper- II (Set - 1)****Time: 3 Hours]****[Total Marks: 100****સૂચના : / Instructions**

(1)

નીચે દર્શાવેલ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.

Fill up strictly the details of signs on your answer book

Name of the Examination:

M.D. (Immuno Hematology and Blood Transfusion)

Name of the Subject :

Paper- II (Set - 1)

Subject Code No.: 2406121601010502

Seat No.:

Student's Signature

- (2) Answer all questions.
- (3) Draw diagrams wherever necessary.

- Q-1.** What are the major and minor surface proteins of red blood cells? Explain their relationship to blood group systems and the application of this in transfusion practice. (25)
- Q-2.** Role of secretor genes in the formation and process of development of Lewis antigens. Add a note on its clinical significance. Explain how Lewis antigens are helpful in assessing secretor status of the individual. (25)
- Q-3.** Write notes on any five: (10 x 5 = 50)
- Describe the role of various neutralizing substances in red cell antibody detection and identification.
 - Draw pedigree chart of autosomal dominant (AD) inheritance. Discuss characteristics of diseases with AD inheritance.
 - Write an SOP for antibody titration technique. What is the importance of scoring and grading of agglutination reaction?

- d. Elaborate on Reagent red cell panels.
 - e. Discuss the pathophysiology of HDFN due to anti-K and the peculiar phenomenon one can observe in patients with AIHA due to autoantibody against Kell antigen. Add a note on acquired loss of red cell Kell antigens.
 - f. Discuss the role of HLA matching in stem cell transplantation, determination of unacceptable mismatches, the role of P and G groups and the different methodologies currently in use for determining HLA types.
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