

# National Board of Examinations

**Question Paper Name :** DNB Immunohematology and Blood Transfusion Paper1  
**Subject Name :** DNB Immunohematology and Blood Transfusion Paper1  
**Duration :** 182  
**Total Marks :** 100  
**Display Marks:** No

**Maximum Instruction Time :** 0  
**Is Section Default? :** No

**Question Number : 1 Question Id : 32718744085 Consider As Subjective : Yes**

**Please write your answers in the answer booklet within the allotted pages as follows:-**

Question Number	Answer to be attempted within	Question Number	Answer to be attempted within
Q. 1	Page 1-5	Q. 6	Page 26-30
Q. 2	Page 6-10	Q. 7	Page 31-35
Q. 3	Page 11-15	Q. 8	Page 36-40
Q. 4	Page 16-20	Q. 9	Page 41-45
Q. 5	Page 21-25	Q. 10	Page 46-50

1. Describe the structure and function of red cell membrane with a well labelled diagram. Explain the principles of underlying antigen-antibody interactions. [5+5]

**Question Number : 2 Question Id : 32718744086 Consider As Subjective : Yes**

Describe briefly IgG immunoglobulins under following headings:

- Structure. [3]
- Subclasses and allotypes. [3]
- Effector functions and their role in transfusion medicine. [4]

**Question Number : 3 Question Id : 32718744087 Consider As Subjective : Yes**

What are antigen presenting cells? Explain the role of inflammatory cytokines in transfusion medicine. [4+6]

**Question Number : 4 Question Id : 32718744088 Consider As Subjective : Yes**

Describe the human neutrophil antigens and explain how they are associated with immune neutrophil disorders giving examples. [10]

**Question Number : 5 Question Id : 32718744089 Consider As Subjective : Yes**

Explain the role of T- lymphocytes in adaptive immunity and its significance in transfusion medicine. [5+5]

**Question Number : 6 Question Id : 32718744090 Consider As Subjective : Yes**

Discuss various blood group systems, collections and series as per ISBT criteria. [10]

**Question Number : 7 Question Id : 32718744091 Consider As Subjective : Yes**

Explain Hardy Weinberg equation and its use in population genetics with an example. [10]

**Question Number : 8 Question Id : 32718744092 Consider As Subjective : Yes**

What is meant by the secretor status of an individual? Explain how the secretor status of a person is determined. [5+5]

**Question Number : 9 Question Id : 32718744093 Consider As Subjective : Yes**

Discuss in detail the steps involved in conducting a scientific research study, including formulation of a research problem, study design, data collection, analysis, and ethical considerations. [10]

**Question Number : 10 Question Id : 32718744094 Consider As Subjective : Yes**

Explain the role of the ABO blood group system in paternity testing and forensic science. Discuss how blood group inheritance patterns are applied to determine biological relationships, and describe the limitations of using ABO typing compared to modern DNA-based techniques. [4+6]