2406121601010501
EXAMINATION JANUARY 2025
DOCTOR OF MEDICINE
DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - I - LEVEL 1

[Time: As Per Schedule] **[Max. Marks: 100]**

Instructions:
1. **Fill up strictly the following details on your answer book**
   a. Name of the Examination : **DOCTOR OF MEDICINE**
   b. Name of the Subject : **DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - I - LEVEL 1**
   c. Subject Code No : **2406121601010501**
2. Draw diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

1	6	0	1		

Q.1 Explain the hemostatic process, focusing on the following: **25**

a. Platelet Activation and Aggregation.
b. The Fibrinolytic system and it's regulation
c. Write a note on the clinical significance of the cell based model of hemostasis

Q.2 Write about Hemolytic anemia as under: **25**

a. Classify haemolytic Anaemia.
b. Elaborate on the genetics basis of Beta - thalassemia.

Q.3 Write short notes on any five of the following. **50**

a. Principle of Polymerase chain reaction and its application in Transfusion Medicine.
b. Discuss the current standards of practice in bio - waste management of Blood centres.
c. Hybridoma technology and its application in Immunohematology.

d. Describe the functions of Cytokines. Enumerate their role in Transfusion Medicine.
e. Describe Glycophorin associated Blood group system.
f. Briefly discuss the Red Blood Cell storage lesions, their clinical significance and its preventive Measures.

*****END*****

2406121601010502
EXAMINATION JANUARY 2025
DOCTOR OF MEDICINE
DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - II - LEVEL 1

[Time: As Per Schedule] **[Max. Marks: 100]**

Instructions:

1. **Fill up strictly the following details on your answer book**
   a. Name of the Examination : **DOCTOR OF MEDICINE**
   b. Name of the Subject : **DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - II - LEVEL 1**
   c. Subject Code No : **2406121601010502**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. Answer all questions.

Seat No:

1	6	0	1		

Q.1 Write about Human Leukocyte Antigen (HLA) as under: **25**

a. Describe the Human Leukocyte Antigen (HLA).
b. Role of HLA in Organ transplantation.

Q.2 a. Describe the role of flow cytometry in immunohematology and Serology. **25**
b. Clinical significance of cytometry in transfusion medicine practices.

Q.3 Write short notes on any five of the following. **50**

a. Discuss the Cold and Warm Autoantibodies and their clinical significance in serology.
b. Describe the role of gene editing and molecular techniques in understanding blood group genetics.
c. Discuss the genetics and clinical application of Bombay Blood Group.
d. Discuss the concept of Alloimmunization in Transfusion Medicine.
e. Describe the clinical and laboratory evaluation of a Hemolytic transfusion reaction.
f. Explain the steps involved in pre transfusion compatibility testing in general. Add a note on the same in Neonatal transfusion.

*****END****

2406121601010503
EXAMINATION JANUARY 2025
DOCTOR OF MEDICINE
DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - III - LEVEL 1

[Time: As Per Schedule] **[Max. Marks: 100]**

Instructions:
1. **Fill up strictly the following details on your answer book**
   a. Name of the Examination : **DOCTOR OF MEDICINE**
   b. Name of the Subject : **DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - III - LEVEL 1**
   c. Subject Code No : **2406121601010503**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

1	6	0	1		

Q.1 A 18 year old boy with severe haemophilia A, detected to have inhibitors of 2 Bethesda units. **25**

a. Describe Haemophilia A.
b. Define your approach towards investigation & management of acute bleeding in joints.
c. Long term management of haemophilic patients.

Q.2 Discuss the therapeutic apheresis under following subheadings: **25**

a. Principle of Therapeutic Plasma Exchange (TPE).
b. Mechanism and limitations of TPE in managing Thrombotic Thrombocytopenic Purpura (TTP).
c. Role of TPE in organ transplantation.

Q.3 **Write short notes on any five of the following.** **50**

a. Cryopreservation
b. Hemovigilance and transfusion reaction reporting in India
c. Advanced screening methods for transfusion transmitted infections.
d. Discuss the role of leucoreduction in transfusion.
e. Massive transfusion protocol and its indications.
f. Donor recruitment strategies.

*****END*****

2406121601010504
EXAMINATION JANUARY 2025
DOCTOR OF MEDICINE
DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - IV - LEVEL 1

[Time: As Per Schedule] **[Max. Marks: 100]**

Instructions:
1. **Fill up strictly the following details on your answer book**
   a. Name of the Examination : **DOCTOR OF MEDICINE**
   b. Name of the Subject : **DOCTOR OF MEDICINE (IMMUNO HAEMATOLOGY & BLOOD TRANSFUSION) PAPER - IV - LEVEL 1**
   c. Subject Code No : **2406121601010504**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

1	6	0	1		

Q.1 Discuss the roles of the following organizations in Blood Centre Accreditations: **25**
   a. AABB
   b. NABH
   c. ISO

Q.2 **Write as under:** **25**

   a. Discuss the role of Artificial Intelligence (AI) in Transfusion Medicine.
   b. Role of AI for Donor selection and Inventory management.

Q.3 **Write short notes on any five of the following.** **50**

   a. Describe the significance of Block chain Technology in ensuring the traceability of Blood Products.
   b. Role of Transfusion Medicine in Regenerative Medicine.
   c. Explain the role of automation and robotics in modern Blood Centres.
   d. Write a detailed note on near infrared spectroscopy (NIRS) and its use in monitoring transfusion reactions
   e. Describe the process and clinical significance of cryopreservation in stem cell transplantation.
   f. Write about the use of Drones in transporting blood components in remote area.

*****END*****