

**M.D. DEGREE EXAMINATION**

**BRANCH XXI – IMMUNOHAEMATOLOGY AND BLOOD TRANSFUSION**

**PAPER III – BLOOD DONOR ORGANISATION TECHNOLOGY OF  
COMPONENTS CLINICAL HAEMATOLOGY**

*Q.P. Code: 203013*

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Essay Questions:**

**(2 x 15 = 30)**

1. A preterm infant presented with jaundice and anaemia. Paediatrician has planned for exchange transfusion.
  - a) Give the guidelines suggested for exchange transfusion for haemolytic disease of preterm neonate within 12 hours of birth.
  - b) What would be the ideal blood group of choice?
  - c) Explain further, other aspects of exchange transfusion in such neonates.
2. Discuss the various functional areas and issues that blood collection and hospital facilities should consider in their planning and response strategies towards “Disaster Management”.

**II. Short notes:**

**(10 x 7 = 70)**

1. Advantages and disadvantages of type & screen versus type & crossmatch.
2. Massive transfusion.
3. Nucleic acid testing – Role in transfusion medicine.
4. Intra operative blood salvage.
5. National blood policy.
6. Harvesting and preservation of stem cells.
7. Role of hospital transfusion committee in promotion of judicious use of blood.
8. a. Near Miss Events. b. Discuss the causes and prevention of “Near Miss Events”.
9. List the essential records to be maintained by blood banks as per Drugs and Cosmetics Act, Govt. of India and discuss the principles of document control.
10. a. What are Quality system essentials?
  - b. What are the various quality indicators for blood bank?

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**I. Essay Questions:**

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1. A 28 year old male admitted for ascending limb paralysis of recent onset. Clinician wants to do a therapeutic plasma exchange. What is the probable diagnosis?  
What is the category of TPE as per ASFA?  
How will you proceed and how many of sessions of TPE is required?
2. A 5 year old female child was diagnosed with thalassemia major. How will provide blood components to this patient. Add a note on transfusion iron overload in these patients.

**II. Short notes:**

**(10 x 7 = 70)**

1. Donor Lymphocyte Infusion.
2. Platelet transfusion refractoriness – What are the guidelines?
3. How to set up an apheresis centre.
4. Discuss about the new donor selection criterias.
5. Blood inventory management.
6. Guidelines for irradiation, sources, calculation of source decay.
7. A 25 years old mother at 28 + 2 weeks, ICT is 2+ and antibody is identified as Anti-D. Doppler shows signs of fetal anemia. How will you manage this mother and fetus?
8. A 35 year old repeated voluntary blood donor, donating for 30<sup>th</sup> time. During TTI screening, he was found to be HIV positive? How will you proceed further? Add a note on counselling of reactive donors.
9. Perioperative Blood Management (PBM).
10. Quality Control (QC) of blood components.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

**[MD 0522]**

**MAY 2022**

**Sub. Code: 3013**

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**Time: Three Hours**

**Maximum: 100 Marks**

**I. Essay Questions:**

**(2 x 15 = 30)**

1. Discuss platelet refractoriness, its pathogenesis, diagnosis, prevention and management.
2. Discuss automation in the Immunohaematology and infectious disease testing labs of a blood centre.

**II. Short notes:**

**(10 x 7 = 70)**

1. Methods to enhance donor motivation.
2. Automation of blood component separation.
3. Endotheliopathy of Trauma.
4. Anti-Kidd antibodies – nature, detection and clinical significance.
5. Describe Global tests of haemostasis and its role in patients with liver disease.
6. Blood Irradiators and indications for the use of irradiated blood products.
7. The role of anti D titre estimation in an O Negative mother at 36 weeks of gestation with a positive ICT.
8. Granulocyte transfusions.
9. Discuss briefly the basic tests of coagulation that guide transfusion therapy in a bleeding patient.
10. Describe process requirements and measures to meet quality requirements of cryoprecipitate and FFP.

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**THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY**

[MD 0723]

**JULY 2023  
(MAY 2023 EXAM SESSION)**

**Sub. Code: 3013**

**M.D. DEGREE EXAMINATION**

**BRANCH XXI – IMMUNOHAEMATOLOGY AND BLOOD TRANSFUSION  
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*Q.P. Code: 203013*

**Time: Three Hours**

**Maximum: 100 Marks**

**I. Essay Questions: (2 x 15 = 30)**

1. Discuss about the differential diagnosis and management of Gestational Thrombocytopenia.
2. What are the differences between Regulatory Accreditation and Certifying bodies? Write a note on NABH standards for Blood Bank Accreditation.

**II. Short notes: (10 x 7 = 70)**

1. Transfusion management in “Major ABO Mismatch Allogenic Bone Marrow Transplantation” recipients.
2. Therapeutic Plasma Exchange in neurological disorders.
3. Advantages and disadvantages of Type and Screening versus Type and Crossmatch.
4. a) In Thalassemia patients on regular transfusion and chelation, what will be the ideal range of iron concentration (mg Fe/g dry weight) suggested to minimize iron deposition in non-storage parenchymal sites and significant toxicity?  
b) Briefly discuss about non-invasive method to assess iron overload.  
c) Explain various steps to minimize such deposition.
5. National Blood Policy and its impact on the practice of Transfusion Services of Our Country.
6. a) Define Near Miss Events.  
b) Strategies to prevent near miss events in Transfusion Medicine.
7. Biomedical waste management in blood centres.
8. Autologous preparation of Platelet rich plasma and its applications.
9. Hospital Transfusion Committee and its role in promotion of judicious use of blood.
10. a) What are the requirements of an outdoor blood donation camp?  
b) Discuss the various preparations for an outdoor camp.

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