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

[MD 1224] DECEMBER 2024 Sub. Code: 4063
(OCTOBER 2024 EXAM SESSION)

M.D. DEGREE EXAMINATION

IMMUNOHAEMATOLOGY AND BLOOD TRANSFUSION

PAPER III – BLOOD DONOR ORGANISATION, TECHNOLOGY OF COMPONENTS AND CLINICAL HAEMOTHERAPY

Q.P. Code: 204063

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(1 x 20 = 20)**

1. Discuss about patient blood management program list out the transfusion triggers for various components as per your institute's recommendations, reasoning out for the same.

II. Short notes: **(8 x 10 = 80)**

1. Acute Normovolemic Haemodilution.
2. Strategies to decrease donor exposure in neonates.
3. Transfusion-related acute lung injury (TRALI).
4. Therapeutic phlebotomy.
5. Methods of NAT testing of blood donors.
6. Write a plan for setting up a centre for sickle cell anaemia management in your hospital.
7. There is a need for a new Blood Bank refrigerator for storage of blood units in your Blood Bank.
   a) What are the specifications you look for while ordering the instruments?
   b) What are all the certificates that are to be provided and verified during installation of the new equipment?
8. What are the donor motivation system programmes you can follow in your institute to motivate and retain voluntary blood donors.

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

[MD 0525] **MAY 2025** **Sub. Code: 4063**

M.D. DEGREE EXAMINATION

IMMUNOHAEMATOLOGY AND BLOOD TRANSFUSION

PAPER III – BLOOD DONOR ORGANISATION, TECHNOLOGY OF COMPONENTS AND CLINICAL HAEMOTHERAPY

Q.P. Code: 204063

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(1 x 20 = 20)**

1. A 10-year-old female is 20 days post cord blood transplant for AML. She develops an Aspergillus lung infection, confirmed by lung biopsy. Her clinical status worsens despite standard antifungal therapy and she remains neutropenic with WBCs continually below 500.
   a) Enumerate causes of neutropenia.
   b) How are neutrophils collected for transfusion?
   c) What are the choices to be followed when ordering granulocytes transfusions for patients?

II. Short notes: **(8 x 10 = 80)**

1. Iron toxicity and its management in multiple transfused patients.
2. Discuss the elements of Quality System in the Immunohaematology laboratory.
3. Describe the advantages of leucoreduction and methods to estimate the residual leukocyte count in blood components.
4. a) Quality indicator for blood donor recruitment, selection and counselling.
   b) Donor Retention strategies
5. How would you monitor coagulation status and plan blood component transfusion support in a patient with post-partum hemorrhage.
6. Hospital Transfusion Committee and its role in promotion of rationale use of blood and blood components.
7. 10-year-old female have the pentad of thrombocytopenia, microangiopathic hemolytic anemia, renal failure, mental status changes or other neurological signs, and fever. Classically, there are schistocytes on the blood film.
   a) What is the probable diagnosis?
   b) What is the category of TPE as per ASFA?
   c) How will you proceed and replacement fluids used in the sessions of TPE?
8. a) What are the recommended guidelines for neonatal RBC transfusions?
   b) Transfusion-associated necrotizing enterocolitis (TANEC).

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[MD 1025] **OCTOBER 2025** **Sub. Code: 4063**

M.D. DEGREE EXAMINATION

IMMUNOHAEMATOLOGY AND BLOOD TRANSFUSION

PAPER III – BLOOD DONOR ORGANISATION, TECHNOLOGY OF COMPONENTS AND CLINICAL HAEMOTHERAPY

Q.P. Code: 204063

Time: Three Hours **Maximum: 100 Marks**

I. Elaborate on: **(1 x 20 = 20)**

1. Discus the management and Laboratory workup of transfusion reactions with emphasis on the concept of imputability. Describe the clinical features, Pathogenesis and management of TRALI.

II. Short notes: **(8 x 10 = 80)**

1. Washed RBC's – Advantages and Disadvantages.
2. Adverse effects of Apheresis.
3. Levi jenning chart and its significance.
4. Methods to detect fetal anemia.
5. Leukoreduction techniques.
6. External quality assurance system.
7. A 25 years primi 30 weeks gestation a known case of ITP with Platelet count 50000 cells / without bleeding.
   a) What would be your opinion on platelet transfusion now?
   b) What is the platelet threshold for elective / caesarean?
   c) What are the modalities of treatment available?
8. A Routine QC was done with a PRBC concentrated form 350ml SAGM Bag. PCV : was 45%
   a) What is your opinion?
   b) What are the registers you verify to identify the error?
   c) What preventive actions you would take?

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