

Master Copy

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (TRANSFUSION MEDICINE) EXAMINATION – APRIL 2016

Date: 4th April 2016

Time: 1.00 p.m. – 4.00 p.m.

Paper I

Answer any five (05) questions.

Answer each question in a separate book.

1.

- 1.1 List five (05) bacteria commonly responsible for contamination of blood and blood components. (20 marks)
- 1.2 State likely sources of contamination of each of these organisms. (20 marks)
- 1.3 Describe the measures that can be taken to prevent bacterial contamination of blood and blood products. (60 marks)

2.

- 2.1 Briefly outline the pathophysiology of disseminated intravascular coagulation in a patient with acute bacterial sepsis. (40 marks)
- 2.2 Give an account of transfusion management of a patient suspected of having DIC following sepsis. (60 marks)

3. Increasing trend in HIV positivity among whole blood donors has been noticed in the recent past in Sri Lanka.

Discuss the strategies that could be implemented in NBTS to minimize the risk of HIV transmission through transfusion giving examples of international practices where applicable. (100 marks)

Contd...../2-

4.

4.1 State the carbohydrate blood group antigens which are most relevant for the practice of transfusion medicine. (10 marks)

4.2 Draw a diagram to describe the biosynthetic pathway of ABO antigens. (40 marks)

4.3 Describe the relationship between ABO and Lewis blood group system. (30 marks)

4.4 Briefly describe the human immune response to ABO antigens. (20 marks)

5. A 45 year old previously healthy female was admitted for hysterectomy. Since her pre-operative Hb is low, anaesthetist requested 1 unit of red cell transfusion. She became unwell with chest pain and loin pain, tachypnoea and hypotension 15 minutes after the commencement of the transfusion.

Discuss the investigations and management of this patient. (100 marks)

6.

6.1 Critically evaluate the indications for red cell exchange in sickle cell disease. (50 marks)

6.2 Briefly outline the pathophysiology of sickle cell disease in relation to above treatment modality. (25 marks)

6.3 Briefly state the complications of red cell exchange and the preventive measures to minimize those complications. (25 marks)

Master copy

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (TRANSFUSION MEDICINE) EXAMINATION – APRIL 2016

Date: 5th April 2016

Time: 9.00 p.m. – 12.00 noon

Paper II

Answer any five (05) questions.

Answer each question in a separate book.

1.

1.1 Briefly outline the management of anaemia in chronic renal failure.
(40 marks)

1.2 Discuss the transfusion management of potential kidney transplant recipients.
(60 marks)

2. A 30 year old diagnosed patient with acute leukaemia on chemotherapy has a platelet count of $15 \times 10^9/l$ in spite of repeated platelet transfusions.

Describe the approach to this clinical scenario and give your advice on management of this patient.
(100 marks)

3.

3.1 Draw a table detailing the choice of ABO blood group for red cells and platelets following haemotopoietic stem cell transplantation according to the stem cell donor and recipient ABO blood groups.
(20 marks)

3.2 List the potential complications caused by ABO incompatibility following stem cell transplantation.
(20 marks)

3.3 Outline the prevention and management of each complication.
(60 marks)

4.

- 4.1 Describe the recommended immuno-haematological monitoring schedule of a pregnant woman to predict the risk of haemolytic disease of fetus and new born (HDFN). (50 marks)
- 4.2 Compare the role of different methods used to measure the antibody levels in predicting the risk of HDFN. (20 marks)
- 4.3 Compare the advantages and disadvantages of routine antenatal prophylaxis with anti-D. (30 marks)

5. Write short notes on:

- 5.1 Iron deficiency in blood donors. (30 marks)
- 5.2 Technologies for pathogen inactivation of blood products. (40 marks)
- 5.3 Frozen red cells. (30 marks)

6. You have been asked to provide advice on minimizing and managing shortages of critical consumables for the blood bank.

Draft a policy document on consumable management addressing the above issues. (100 marks)