

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

POSTGRADUATE DIPLOMA IN TRANSFUSION MEDICINE
EXAMINATION – FEBRUARY 2016

Date :- 8th February 2016

Time :- 1.00 p.m. – 4.00 p.m.

PAPER I

Answer all questions.

Answer each question in a separate book.

1. You have been appointed as the Medical Officer, Blood Bank of a newly opened Base Hospital where there was no Blood Bank earlier. Medical Superintendent requests you to prepare a plan to establish a new Blood Bank to maintain basic functions (excluding blood collection processing and screening for TTI).
 - 1.1. What are the minimum requirements to be considered when establishing a new Blood Bank? (50 marks)
 - 1.2. Explain your plan to meet the demand for blood products and safe transfusion practices in this hospital. (50 marks)
2.
 - 2.1. List out ten (10) important causes of permanent deferrals of blood donors in whole blood donation. (30 marks)
 - 2.2. Describe the basis of deferral periods related to transfusion transmitted infections giving examples wherever necessary. (70 marks)
3.
 - 3.1. Describe the development of ABO blood group antigens. (50 marks)
 - 3.2. Why ABO blood group system is clinically significant? (50 marks)

Contd...../2-

4. Transfusion laboratory is frequently asked to provide blood component therapy for patients with chronic liver disease.

4.1. Discuss factors leading to an increased blood components/products therapy in chronic liver disease. (50 marks)

4.2. Briefly discuss the value of blood components/products in the prevention and treatment of bleeding in patients with end-stage liver disease. (50 marks)

5.

5.1. Briefly describe the changes of haematological parameters in pregnancy. (50 marks)

5.2. List out the features of haemorrhagic shock. (20 marks)

5.3. What are the haematological target values in the management of obstetric haemorrhage? (30 marks)

6. Briefly explain the following :

6.1. Inheritance of HLA antigens (10 marks)

6.2. Linkage disequilibrium (10 marks)

6.3. Polymorphism of HLA system (10 marks)

6.4. Antigenic structure of HLA class I antigens (10 marks)

6.5. Antigenic structure of HLA class II antigens (10 marks)

6.6. Antigen presentation of class I antigens (10 marks)

6.7. Antigen presentation of class II antigens (10 marks)

6.8. Distribution of class I antigens (10 marks)

6.9. Distribution of class II antigens (10 marks)

6.10. Involvement of HLA system in transfusion (10 marks)

7.

7.1. A mobile organizer informs you that his regular blood donation campaign which is to be held in 2 days time, cannot be held in the usual place. He seeks your advice regarding holding it in another place.

How would you handle this situation? (30 marks)

7.2. After starting the above donation campaign, you notice that there are many post donation fainting attacks. Give your advice accordingly.

(20 marks)

7.3. It was found that there was a confirmed HIV positive donation from the above donation campaign. List the steps that should be taken regarding this incident.

(50 marks)

8. A new viral disease has been identified in a neighbouring country.

8.1. How would you assess the need for preventive strategies in relation to blood safety?

(60 marks)

8.2. What steps would you take to minimise the effect of a major epidemic to the services provided by the blood bank?

(40 marks)