

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (TRANSFUSION MEDICINE) EXAMINATION – MARCH 2014

Date: 17th March 2014

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 Identify the 3 main components of haemostasis which result in cessation of bleeding after blood vessel wall injury. (20 marks)
- 1.2 Discuss how a massive haemorrhage may interfere with these protective mechanisms? (60 marks)
- 1.3 What patient factors are likely to aggravate bleeding? (20 marks)

2.

- 2.1 Identify the antigen systems present on human platelets. (20 marks)
- 2.2 Identify 5 clinical conditions which involve these platelet antigen systems. (20 marks)
- 2.3 Discuss the pathophysiology of one of the clinical problems you have mentioned. (30 marks)
- 2.4 Briefly describe the principals and steps involved in the MAIPA assay. (30 marks)

3. A 35 year old female presented with sudden onset symptoms of anaemia with yellow discolouration of eyes. On examination she was found to be pale and icteric.

Hb - 6.0 g/dl

Retic count - 20%

DAT - positive with Ig G 3+

- 3.1 Outline the investigations you would do in this patient. (30 marks)

- 3.2 Discuss the problems encountered in pre-transfusion testing and how you would provide blood for this patient. What additional information would you request? (70 marks)

4.

- 4.1 Briefly describe the serological and microbiological testing you would want to perform on all blood donations. (60 marks)

- 4.2 Outline additional investigations which may be required for specific donor or patient group. (40 marks)

5. Write short notes on

- 5.1 Estimation of fetomaternal haemorrhage. (30 marks)

- 5.2 Hepatitis E (30 marks)

- 5.3 Hyperhaemolysis syndrome (40 marks)

6. "Transfusion therapy is a key intervention in decreasing morbidity and mortality in patients with sickle cell disease."

- Discuss this statement in relation to acute and chronic clinical problems requiring transfusion in this disease. (100 marks)

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Date: 18th March 2014

Time : 9.00 a.m. – 12.00 noon

PAPER II

Answer any five (05) questions.

Answer each question in a separate book.

1. You are a newly appointed consultant in transfusion medicine in a hospital where the consultant haematologist has little involvement in blood transfusion.
 - 1.1 Outline the structure and processes you would need to implement within the hospital to support good transfusion practice. (60 marks)
 - 1.2 Outline the patient associated problems you would expect to deal with on a routine basis. (40 marks)

2.
 - 2.1 What is the definition of Transfusion Related Acute Lung Injury (TRALI) (20 marks)
 - 2.2 Discuss the pathophysiology of this condition. (40 marks)
 - 2.3 Describe the interventions which would reduce the likelihood of this condition occurring. (40 marks)

3. Supply of platelets in your hospital is inadequate to meet the demand.
 - 3.1 How would you assess the problem? (60 marks)
 - 3.2 What measures would you take to resolve the problem? (40 marks)

4. A 26 year old woman attends your out patient clinic. Her first child was born with a platelet count of $30 \times 10^9/l$ and a diagnosis of neonatal alloimmune thrombocytopenia was made. She would like further children. Provide a management plan for her next pregnancy. (100 marks)

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5.
 - 5.1 What is the intended effect and side effects of irradiation on labile blood components? (30 marks)
 - 5.2 What are the indications for irradiated blood components in the antenatal and post natal period? (30 marks)
 - 5.3 How would you ensure that irradiated blood components are provided to all appropriate patients in your hospital. (40 marks)

6. Write short notes on
 - 6.1 Paroxysmal cold haemaglobinuria (30 marks)
 - 6.2 Use of intravenous immunoglobulin (IVIG) (40 marks)
 - 6.3 Leucapheresis (30 marks)