

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

POSTGRADUATE DIPLOMA IN TRANSFUSION MEDICINE
EXAMINATION – FEBRUARY 2019

Date :- 22nd February 2019

Time :- 1.00 p.m. – 4.00 p.m.

PAPER I

Answer all eight (08) questions.

Answer each question in a separate book.

1. A 30 year old male patient with stage 5 chronic kidney disease due to lupus nephritis has been on hemodialysis for the past 5 years with no history of blood transfusion or previous transplantation. He was offered a kidney allograft from a deceased donor. Laboratory investigations showed following results.

- 1-0-0 HLA mismatch.
- Complement dependent cytotoxicity cross match (CDC-XM) positive for both B and T cells.
- Flow cytometry cross match (FCXM) negative for both B and T cells
- Luminex Single Antigen Bead (L-SAB) negative for DSA.

1.1. What do you mean by 1-0-0 mismatch? (10 marks)

1.2. What are the disadvantages of CDC-XM? (10 marks)

1.3. Explain the positive CDC-XM with negative FCXM in this patient. (20 marks)

1.4. What additional tests would you do to confirm your explanation given in 1.3? (20 marks)

1.5. Should this donor be accepted? Give reasons. (40 marks)

Contd.../2-

3. Write short notes on-

- 3.1. Use of IVIG in transfusion practice. (30 marks)
- 3.2. Irradiation of blood products. (30 marks)
- 3.3. Laboratory diagnosis of fetal/neonatal alloimmune thrombocytopenia. (40 marks)

4. Detection of confirmed positive blood donors for HIV infection has been increased during past few years.

- 4.1. What are the possible reasons for the above? (30 marks)
- 4.2. What measures can be taken to minimize HIV transmission through blood transfusions? (70 marks)

5.

- 5.1. Briefly describe the mixed field agglutination and its significance. (30marks)
- 5.2. State the importance of high titre ABO blood group system antibodies in transfusion practice. (30 marks)
- 5.3. List three (03) applications of direct antiglobulin test and three (03) applications of indirect antiglobulin test. (30 marks)
- 5.4. Name the first five (05) blood group systems according to ISBT nomenclature with their chromosomal location. (10 marks)

6.

- 6.1. List out five (05) strategies to reduce the need for red cell transfusion in neonates. (25 marks)
- 6.2. Enumerate three (03) precautions to prevent each of the following complications during neonatal transfusion. (50 marks)
 - 6.2.1. Hemolytic transfusion reaction
 - 6.2.2. Infectious disease transmission
 - 6.2.3. Circulatory overload
 - 6.2.4. Hyperkalemia
 - 6.2.5. Hypothermia
- 6.3. What are the indications for FFP transfusion in infants and children (25 marks)