



UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
THIRD YEAR SECOND SEMESTER EXAMINATION IN BScHons(MLS)-2020
MLSTM 3226 TRANSFUSION MEDICINE

PAPER II

Date 25.11.2022

Time: 2 ½ Hours

ANSWER ALL EIGHT QUESTIONS

1. A 16 Year old girl, presented with heavy menstrual bleeding, shortness of breath and pallor admitted to the Accident & Emergency department of Teaching Hospital, Jaffna. She had no bleeding this time. She had a history of heavy menstrual bleeding two months back and two units of blood transfusion was given for her anaemia.
 - 1.1 What is the probable reason for the drop in Hb%. What is the diagnosis in this patient?

(20 Marks)
 - 1.2 List the preliminary immunohaematological investigations that should be carried for this patient in the blood bank

(20 Marks)
 - 1.3 Briefly explain, how to select the blood for transfusion in this patient

(20 Marks)
 - 1.4 Describe the plan of actions to be taken in future regarding the blood transfusion and antenatal screening of this patient

(40 Marks)

2.
 - 2.1 Mention **five (05)** criteria for the selection of red cell concentrate for exchange transfusion

(30 Marks)
 - 2.2 State the factors which are present in Fresh frozen plasma

(20 Marks)
 - 2.3 List **Four (04)** indications for cryopreservation of Red cell concentrate

(20 Marks)
 - 2.4 What are the quality parameters of Red cell concentrate?

(30 Marks)

3.
 - 3.1 What is a transfusion reaction?

(20 Marks)
 - 3.2 Classify the different types of transfusion reactions

(20 Marks)
 - 3.3 Describe briefly the pathophysiology of Acute haemolytic transfusion reaction due to ABO incompatibility

(40 Marks)
 - 3.4 List **Three (03)** acute transfusion reactions other than mentioned in 3.3

(20 Marks)

4. 4.1 List **Five (05)** indications for washed red blood cells transfusions (20 Marks)
- 4.2 Mention **Three (03)** blood components which should be kept below -30°C (20 Marks)
- 4.3 Write **Two (02)** indications for transfusion of each component you mentioned in 4.2 (20 Marks)
- 4.4 Briefly describe the procedure of component preparation from whole blood collected to quadruple bags (40 Marks)
5. 5.1 What are the mandatory Transfusion Transmitted Infection (TTI) tests carried out on all blood donations in Sri Lanka (20 Marks)
- 5.2 State the unique characteristics of a transfusion transmissible infectious agent (20 Marks)
- 5.3 Describe **One (01)** of the TTI test methods used for screening of blood donations by the NBTS (40 Marks)
- 5.4 Briefly explain the steps to be followed by the testing laboratory when a screening test of TTI becomes reactive (20 Marks)
6. 6.1 What are the contributory factors in inventory management & control (30 Marks)
- 6.2 How does the blood supply chain contribute to inventory control (30 Marks)
- 6.3 Describe the inventory management practices needed in order to maintain blood stock adequacy (40 Marks)
7. 7.1 List **Four (04)** indications for platelet transfusions (20 Marks)
- 7.2 Mention the types of platelets available at the blood bank (20 Marks)
- 7.3 Briefly describe the advantages and disadvantages of the each of the type mentioned in 7.2 (30 Marks)
- 7.4 What are the steps to be taken to minimize the bacterial contamination of platelets (30 Marks)
8. Write short notes on
- 8.1 Permanent deferral criteria of blood donors (30 Marks)
- 8.2 Autologous blood transfusion (30 Marks)
- 8.3 Stem cell transplantation (40 Marks)