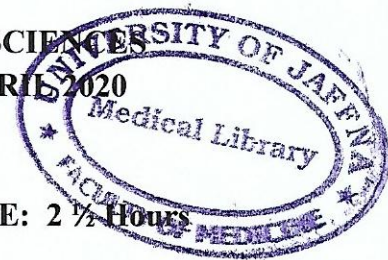


UNIVERSITY OF JAFFNA, SRILANKA
BACHELOR OF SCIENCES IN MEDICAL LABORATORY SCIENCES
THIRD YEAR SECOND SEMESTER EXAMINATION – APRIL 2020
MLSTM3226 TRANSFUSION MEDICINE
PAPER II



DATE: 03.09.2020

TIME: 2 ½ Hours

ANSWER ALL EIGHT QUESTIONS

1. Write short notes on
 - 1.1 ABO blood group system and its clinical significance **(25 Marks)**
 - 1.2 Frozen red cells **(25 Marks)**
 - 1.3 Direct antiglobulin test **(25 Marks)**
 - 1.4 Factor VIII preparation **(25 Marks)**
2.
 - 2.1 List the blood components available in the regional blood center Teaching Hospital, Jaffna with their storage temperature and shelf life **(30 Marks)**
 - 2.2 List the red cell products available in Sri Lanka **(20 Marks)**
 - 2.3 Mention the methods and their advantages of leucocytes reduction of red cells concentrates **(20 Marks)**
 - 2.4 What are the information available in blood component labels? **(30 Marks)**
3.
 - 3.1 Describe the grading of agglutination during blood bank investigations. **(40 Marks)**
 - 3.2 Mention the required blood sample type to perform the following investigations at blood bank
 - 3.2.1 ABO and Rh D grouping **(04 Marks)**
 - 3.2.2 Antibody screening **(04 Marks)**
 - 3.2.3 Direct antiglobulin test **(04 Marks)**
 - 3.2.4 Extended phenotyping of red cells **(04 Marks)**
 - 3.2.5 Antibody identification **(04 Marks)**
 - 3.3 Briefly describe how do you perform daily quality controls of ABO grouping antisera **(20 Marks)**
 - 3.4 How do you confirm Rh D status of donor blood? **(20 Marks)**

4

- 4.1 List the different categories of blood donors? (20 Marks)
- 4.2 Mention the serological markers for each Transfusion Transmitted Infections (TTI) test performed in Blood bank for donor blood? (30 Marks)
- 4.3 How do you manage blood samples and blood products of HIV reactive donor as a Medical laboratory technologist in the blood bank? (20 Marks)
- 4.4 How do you prevent bacterial contamination of platelet concentrate? (30 Marks)

5.

- 5.1 Describe the pathophysiology of Rh haemolytic disease of the newborn (30 Marks)
- 5.2 Briefly discuss on how to prevent the above mentioned disorder (20 Marks)
- 5.3 Mention the methods available to quantify fetomaternal bleeding? (20 Marks)
- 5.4 Mention the required investigations and their expected findings using baby's and mother's blood samples to diagnose Rh HDN (30 Marks)

6.

- 6.1 List the causes of acute haemolytic transfusion reaction? (25Marks)
- 6.2 List the non-immune delayed type transfusion reactions? (25Marks)
- 6.3 Briefly discuss the steps taken to prevent bacterial contamination of blood products? (30 Marks)
- 6.4 Mention the required materials to be sent to the blood bank during reporting of a transfusion reaction? (20 Marks)

7.

- 7.1 List the indications of platelet transfusion (40 Marks)
- 7.2 List the types of platelets available at the blood bank (20 Marks)
- 7.3 Briefly describe the advantages and disadvantages of each of the type you have mentioned in 7.2? (40 Marks)

8.

- 8.1 Mention the relevant investigations that you would perform to exclude Malaria from donor blood? (20Marks)
- 8.2 List the quality parameters that needs to be checked for assessing the quality of red cell concentrate? (20 Marks)
- 8.3 List the different types of blood bags available in the blood bank to collect donor blood and mention the products prepared from each type (30 Marks)
- 8.4 Mention the anticoagulant preservative solutions in different blood bags and discuss their functions (30 Marks)