050

THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCES
ACADEMIC YEAR 2019/2020– SEMESTER I

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
MDU6451 – TRANSFUSION & TRANSPLANTATION SCIENCE
NO BOOK TEST II **DURATION: 1 ½ HOURS**

DATE: 12th MARCH 2020 TIME: 9.00 AM – 10.30 AM

REGISTRATION NO: .....

IMPORTANT INSTRUCTIONS/ INFORMATIONS TO CANDIDATES

- This question paper consists of **8 pages** with **10 Multiple Choice Questions (Part A), 04 Structured Essay Questions (Part B)** and **01 Essay Question (Part C).**
- Write your Registration Number in the space provided.
- Answer **ALL** questions.
- **Multiple Choice Questions (Part A):** Mark the best answer for each question in the answer sheet provided by placing a cross (X) in **INK** in the relevant cage. (Answers in pencil will **NOT** be marked)
- **Structured Essay Questions (Part B):** Write answers within the space provided.
- **Essay Question (Part C):** Answer the question on the provided papers.
- Do not remove any page/part of this question paper from the examination hall.
- Mobile phones and any other electronic equipment are **NOT** allowed. Leave them outside.

To:

Part A: Multiple Choice Questions (10 marks)

1. Which one of the following blood samples is correct on blood sample for blood bank testing?
    a) Haemolysed sample can be used to identify the blood group correctly
    b) Direct Antiglobulin Test (DAT) is done on clotted sample
    c) Pre labelled samples for testing is an acceptable practice
    d) 3-5% suspension of three times washed blood sample is used for forward grouping of ABO group

2. When you detect an error in the BHT number of the sample label,
    a) send the sample back to the ward for correction
    b) discard the sample and request a new sample
    c) if it is a minor error correct it according to the request and proceed testing
    d) paste a new label with correct details at the accepting counter

3. Which of the following blood products is not suitable for bleeding patient?
    a) Red cell concentrate
    b) Buffy coat
    c) Platelet concentrate
    d) Fresh Frozen Plasma (FFP)

4. Following statement is correct on transfusion reactions
    a) It is commonly seen in patients receiving transfusions.
    b) If patient complains or any change you notice transfusion should be stopped immediately.
    c) If it is a minor complaint transfusion can be continued without assessment.
    d) Bacterial contamination is commonly seen in thawed plasma transfusion.

5. Which of the following test is not required before red cell transfusion?
    a) Direct Antiglobulin Test (DAT)
    b) ABO grouping & Rh D typing
    c) Antibody screening
    d) Cross matching

6. Clinically significant antigens on WBC are called,
    a) A antigens
    b) B antigens
    c) human leukocyte antigens
    d) human Neutrophil antigens

7. Human Leukocyte antigens are
   a) found on the surface of all nucleated human cells
   b) associated with autoimmune diseases
   c) important in renal transplants.
   d) responsible for mounting an immune response against infections.

8. An individual person will posses
   a) two HLA DR alleles coding for four DR antigens
   b) two HLA A alleles coding for two HLA antigens.
   c) four HLA B alleles coding for four HLA B antigens.
   d) two HLA C alleles coding for two HLA C antigens.

9. HLA Antibodies are formed
   a) due to organ transplants.
   b) due to bacterial infections
   c) due to chemical exposures.
   d) due to blood transfusions.

10. Human platelet antigens and/or antibodies are responsible for
   a) post transfusion purpura
   b) hemolytic disease of the fetus and newborn
   c) neonatal alloimmune thrombocytopenic purpura
   d) delayed haemolytic transfusion reactions.

Part B: Structured Essay Questions (80 marks)

1. Write the blood group of following reactions.

	Anti A	Anti AB	Anti B	Anti D	A cell	B cell	O cell	Blood group
1.1	0	0	0	0	+3	+3	0	
1.2	+4	+4	+4	+4	0	0	0	
1.3	0	+4	+4	0	+3	0	0	
1.4	+4	+4	0	+4	0	+3	0	
1.5	0	0	0	+4	+3	+3	+3	

(TOTAL 20 MARKS)

2.

2.1 Name the serological method used for HLA typing. (2.5 marks)

.....

2.2. List the main steps for the method mentioned in (2.1). (10 marks)

.....

.....

.....

.....

.....

.....

2.3 Name two (02) anticoagulants used for collecting blood for the above method. (2.5 marks)

.....

.....

2.4 Describe the transport and storage conditions of the above blood samples. (5 marks)

.....

.....

(TOTAL 20 MARKS)

3.

3.1 Name three (03) molecular methods available for HLA typing (6 marks)

I).....

II).....

III).....

3.2. List two (02) specimen samples that are used for molecular testing and give following specifications for the above mentioned 2 specimen samples. (14 marks)

Specimen 1 .....

Container .....

Volume .....

Storage temperature .....

Transport temperature .....

Specimen 2 .....

Container .....

Volume .....

Storage temperature .....

Transport temperature .....

(TOTAL 20 MARKS)

4. Fill in the blanks.
Write the indication and storage temperature of following blood components

	Blood component	Indication	Storage temperature
4.1	Red cell concentrate.		
4.2	FFP		
4.3	Platelet concentrate.		
4.4	Buffy coat.		
4.5	Cryoprecipitate.		

(TOTAL 20 MARKS)

Part C: Essay Question (10 marks)

1.

1.1 List the acute transfusion reactions.
1.2 Explain why prevention of ABO incompatibility is very important.
1.3 Discuss the role of a Medical Laboratory Technologist in preventing ABO incompatible transfusions.

(10 marks)

***** Copyrights reserved *****

BACHELOR OF MEDICAL LABORATORY SCIENCES HONOURS
MDU6451 – TRANSFUSION & TRANSPLANTATION SCIENCE
NO BOOK TEST II

DATE: 12th MARCH 2020 TIME: 9.00 AM – 10.30 AM

ANSWER SHEET FOR PART A

1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
4.	a	b	c	d
5.	a	b	c	d
6.	a	b	c	d
7.	a	b	c	d
8.	a	b	c	d
9.	a	b	c	d
10.	a	b	c	d

***** Copyrights reserved *****