2025/11

SET A

MASTER OF MEDICAL LABORATORY TECHNOLOGY
THIRD SEMESTER
BLOOD BANKING AND IMMUNOHEMATOLOGY
MMLT – 303

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 3 hrs. **Full Marks: 70**

(Objective)

Time: 30 min. **Marks: 20**

Choose the correct answer from the following: ***1×20=20***

1. Where was the first blood bank established in India?
   a. Bombay b. Calcutta
   c. Delhi d. Madras
2. Who performed the first successful man to man blood transfusion?
   a. Norman Bethune b. James Blundell
   c. Karl Landsteiner d. Reuben Ottenberg
3. What should be the minimum body weight for the donation of 450 ml of blood?
   a. 40 kg b. 45 kg
   c. 50 kg d. 55 kg
4. Which ABO blood group has the lowest percentage of H antigen?
   a. A_1 b. B
   c. A_1B d. O
5. For how long blood can be stored in a blood bag containing CPDA?
   a. 21 days b. 25 days
   c. 31 days d. 35 days
6. Anti-human globulin is not used in which of the following test.
   a. Direct Coomb's test b. Compatibility test
   c. D^u test d. All of these
7. Methylene Blue dye is used for giving the colour of which anti-sera
   a. Anti- A b. Anti-B
   c. Anti-AB d. Anti-D
8. For what period of time a person who recently had a tattoo cannot donate blood.
   a. 1 month b. 3 months
   c. 6 months d. 1 year
9. Which of the following subgroup of A is clinically significant?
   a. A_x b. A_m
   c. A_2 d. A_3

10. Which of the following is not considered while selecting a donor.
    a. Hemoglobin
    b. Weight
    c. Height
    d. Blood pressure

11. Which of the following is not an antigen of Rh blood group system?
    a. C
    b. D
    c. E
    d. F

12. In major cross-matching which of the following are cross matched against each other?
    a. Donor red cell with patient serum
    b. Donor plasma with patient serum
    c. Donor serum with patient red cell
    d. Donor plasma with patient red cell

13. Fresh Frozen Plasma are stored in what temperature.
    a. 4°C
    b. -4°C
    c. -30°C
    d. -70°C

14. For how long platelet concentrate can be stored?
    a. 5 days
    b. 10 days
    c. 30 days
    d. 90 days

15. What is detected in Coombs test?
    a. Antigen
    b. Antibody
    c. Incomplete antigens
    d. Incomplete antibodies

16. If a person had a minor surgery, for what duration of time is he not allowed to donate blood.
    a. 1 month
    b. 3 months
    c. 6 months
    d. 1 year

17. The name of which of the following blood group system is taken from the patient?
    a. Lutheran
    b. Lewis
    c. Kidd
    d. Kell

18. Which of the following is an antigen of Kidd blood group system?
    a. J^a
    b. K^a
    c. JK^a
    d. KJ^a

19. Which of the following is a transfusion transmitted disease?
    a. Hepatitis C
    b. Malaria
    c. Syphilis
    d. All the above

20. Which of the following is not an antigen of Kell blood group system?
    a. K
    b. k
    c. Ke^a
    d. Kp^a

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Descriptive

Time : 2 hrs. 30 min. **Marks : 50**

[Answer question no.1 & any four (4) from the rest]

1. Discuss briefly about the ABO system including their subgroups. Explain Bombay blood group system. Write a short note on preparation of 5% cell suspension. **4+3+3 =10**

2. Explain Rh blood group system including D^u phenotype and Rh null syndrome in detail. **10**

3. Write a short note on adverse donor reaction and their management. **5+5=10**

4. Describe the criteria of physical examination and explain about the immunization that are to be considered while selecting a donor. **5+5=10**

5. Write in details about Hemolytic Disease of the Newborn (HDN). **10**

6. Write a short note on the principle of aniti-human globulin test. Explain the procedure of indirect coomb's test. **4+6=10**

7. Write in detail about the different blood grouping system? **10**

8. Write about the blood components & methods of preparation of platelet concentrate? **5+5=10**

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