REV-01
BMLT/78/39/44

2024/12

SET B

BACHELOR OF MEDICAL LABORATORY TECHNOLOGY
FIRST SEMESTER
PATHOLOGY I
BMLT – 105

[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. Which of the following is also known as the juvenile red cells
   a. Proerythroblast
   b. Polychromatic erythroblast
   c. Orthochromatic erythroblast
   d. Reticulocyte

2. Globin chains of alpha and beta is found in
   a. HbA
   b. HbA2
   c. HbF
   d. All of these

3. A symbol with black pictures in yellow or orange background indicates
   a. Prohibitory symbol
   b. Safety symbol
   c. Hazard warning symbols
   d. None of these

4. Injury cause by a broken glass to the body is....
   a. Physical hazard
   b. Chemical hazard
   c. Biological hazard
   d. Fire hazard

5. Erythropoietin influences the production of which blood cell?
   a. Red blood cell
   b. White blood cell
   c. Platelets
   d. All of these

6. What is the normal range of hemoglobin in female
   a. 12-16 g/dl
   b. 13-17 g/dl
   c. 10-15 g/dl
   d. 15-20 g/dl

7. Which test is used for the analysis of bile salts
   a. Ehrlich's Test
   b. Fouchet's test
   c. Haey's test
   d. None of these

8. Which of the following is the fundamental property of the HSCs
   a. Differentiation
   b. Self renewal
   c. Both of these
   d. None of these

9. In an infant what is the preferred site of skin puncture for blood collection?
   a. Finger tip
   b. Heel
   c. Ear lobe
   d. All of these

10. Which percentage of alcohol swab is used for sterilization for blood collection
    a. 60%
    b. 70%
    c. 80%
    d. 90%

11. Haem molecule contains which of the following minerals
    a. Magnesium
    b. Iron
    c. Calcium
    d. Sodium

12. Which of the following chemicals is explosive in nature
    a. Chromic acid
    b. Picric Acid
    c. Potassium Cyanide
    d. Selenite

13. Which is the smallest among the blood cells
    a. Erythrocytes
    b. Lymphocytes
    c. Thrombocytes
    d. None of these

14. Oliguria refers to urine output
    a. Less than 500 ml/day
    b. Less than 50 ml/day
    c. More than 3 litre/day
    d. None of these

15. Each proerythroblast produces _____ matures RBCs.
    a. 2-4
    b. 4-8
    c. 8-16
    d. 16-32

16. A symbol containing round white pictures with blue background indicates
    a. Prohibitory symbol
    b. Safety symbol
    c. Hazard warning symbols
    d. None of these

17. Which of the following is not a biological hazard
    a. Air borne organisms
    b. Blood borne organisms
    c. Infections agents
    d. Toxic chemicals

18. Which of these is not a Transfusion Transmitted Disease?
    a. AIDS
    b. Hepatitis - B
    c. Dengue
    d. Malaria

19. What is the storage temperature for Packed Red Blood Cells?
    a. 1-6 °C
    b. -20 to -40 °C
    c. 37 to 45 °C
    d. -40 to -80 °C

20. Natural Killer cells are a type of
    a. Monocyte
    b. Basophil
    c. Lymphocyte
    d. None of these

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Descriptive

Time : 2 hrs. 30 min. Marks : 50

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

1. a. Describe different components of blood. 5+5=10
   b. Describe the white blood cells.

2. Explain the various methods of urine analysis. 10

3. Describe briefly about the common laboratory hazards. Explain in detail the First Aid Practice in Laboratory. 5+5=10

4. Explain the various types of chemicals used in a laboratory, also describe their handling and storage. Write a short note on the signs and symbols used in a laboratory. 4+3+3 =10

5. With the help of a labelled diagram explain about the biosynthesis of hemoglobin. 10

6. Explain in detail about hematopoiesis. Discuss briefly about the erythroid series 7+3=10

7. Briefly discuss about the various methods for collection of blood. Write a short note on anticoagulants. 6+4=10

8. Describe about the blood grouping and cross matching methods used in blood banking. 10

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