

JAN-2024
BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. in Medical Laboratory Technology

[Time: 3 Hours]

[Max. Marks: 80]

III SEMESTER

PAPER - I (Fundamentals of Biochemistry I)

QP CODE: 8330

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Write in detail about the separation, classification, and functions of lipoproteins.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Define lipids. Write briefly about their functions.
3. Name essential fatty acids (EFA), State the deficiency manifestations of EFA.
4. Mention the difference between the eukaryotic and prokaryotic cells.
5. Describe the principle and significance of Benedict's test for urine sugar.
6. Write a note on the chemical constituents of the cell.
7. Write in detail about pre-analytical, Analytical & post analytical errors that occur in the clinical laboratory.
8. Write a note on the concept of quality control applied in the laboratory.
9. Draw a neat diagram of mitochondria and write about its functions.
10. Principle and uses of Electrophoresis.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Active transport.
12. Clinical significance of proteinuria.
13. Phospholipids
14. Clinical significance of Cardiolipin.
15. Write Full form and normal ranges for 1. FBS. 2. PPBS. 3. RBS.
16. Principle behind Flame photometer technique.
17. Applications of turbidometry.
18. Define Beer- Lambert's law.
19. Note on calorimeter.
20. The use of Centrifuge, vortex mixer and Magnetic stirrer.
21. How are monosaccharides further classified?

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III SEMESTER

PAPER - II (Fundamentals of Microbiology I)

QP CODE: 8331

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. Define and classify immunity. Describe in detail about innate immunity.

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Hot air oven
3. Bacterial capsule
4. Louis Pasteur
5. Active immunity
6. Immunoglobulin G
7. Type I Hypersensitivity
8. Selective media
9. Agglutination reaction
10. Biomedical waste management

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Name three gram negative bacteria
12. Name three killed vaccines
13. Antigen
14. Name three enriched media
15. Name three hospital associated infections
16. Name three types of microscope
17. Hand hygiene
18. Name three portal of entry of infection
19. Types of ELISA
20. Name three physical methods of sterilization
21. Enumerate three differences between prokaryotic and eukaryotic cells

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III SEMESTER

PAPER - III (Haematology & Clinical Pathology I)

QP CODE: 8332

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

Long Questions

10X1 = 10 Marks

1. What are Universal safety precaution guidelines? Add a note on laboratory safety measures.(5+5)

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. List and describe the instruments used in hematology
3. Describe the processing and staining of cytological specimens
4. Describe the tests for detection of glucose in urine
5. Write about the physical examination of urine.
6. Write in detail about the different methods of blood collection.
7. Describe about the preparation & staining of peripheral blood smears.
8. Write in detail about the stages of Myelopoiesis with labelled diagram.
9. Describe in detail about ABO blood grouping and Rh typing.
10. Colour coding of biomedical Waste

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Write 3 causes for Ketone bodies in the urine (Ketonuria)
12. Name the anticoagulants used in hematology
13. What is absolute eosinophil count. Write the normal range.
14. Write 3 indications for FNAC.
15. Write 3 uses of Neubauer chamber.
16. What is Reticulocyte? Write its normal range in newborn and adult?
17. Name the sites of bone marrow aspiration
18. Define anemia. Write the normal Hb value in adult male and female?
19. Hematology Cell counter
20. What is ESR? Write the normal range in adult males and females.
21. What is PAP smear? What is its significance?