1/11/26
BM (23)

BLDE (DEEMED TO BE UNIVERSITY)

B.Sc. 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. What is Jaundice? Explain causes, types and the blood/urine tests used for diagnosis of it.

Short Essays: (Any – 8) **5 X 8 = 40 Marks**

2. Gluconeogenesis pathway.
3. Biomedical waste – handling and disposal.
4. Hazards in laboratory (physical, chemical, biological).
5. Normal range for HbA1c and its significance.
6. Sample collection and storage in biochemistry.
7. Principle and use of colorimeter.
8. Errors in laboratory work.
9. Digestion of carbohydrates.
10. How insulin controls blood sugar.

Short Answers: (Any – 10) **3 X 10 = 30 Marks**

11. Define molecular weight and equivalent weight with example.
12. Name three heme-containing proteins.
13. Principle and use of flame photometer.
14. Name the anticoagulant used in glucose test and the reason behind it.
15. Types of jaundice.
16. First aid in laboratory.
17. Explain the procedure of sample collection for ABG analysis.
18. Uses of hot air oven.
19. Constituents of urine.
20. Define glycogenesis and glycogenolysis.
21. Normal ranges of fasting, post-prandial and random blood sugar level.

Jan-26

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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. Draw and label a bacterial cell. Explain structure and function of flagella.

Short Essays: (Any -- 8) **5 X 8 = 40 Marks**

2. Contributions of Louis Pasteur.
3. Bacterial growth curve.
4. Selective media with examples.
5. Universal safety precautions in lab.
6. Autoclave.
7. Types of immunity.
8. ELISA – principle and use.
9. IgM antibody – structure and role.
10. Gram staining.

Short Answers: (Any – 10) **3 X 10 = 30 Marks**

11. Koch's postulates.
12. Name three Gram-positive cocci.
13. Name three spore-forming bacteria.
14. Anaerobic culture methods.
15. Structure and function of IgA.
16. Name three live vaccines.
17. Materials sterilized by Hot air oven.
18. Capsule.
19. Three enriched media.
20. Define infection.
21. Name the antigen antibody reactions.

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[Time: 3 Hours] [Max. Marks: 80]

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 is biomedical waste? What is the need for biomedical waste management? Write a note on its disposal. (2+3+5)

Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Explain the principle of automated hematology cell counters.
3. What is PCV? What are the different methods of estimation of PCV?
4. Explain the method of calculating absolute eosinophil count.
5. Iron deficiency anemia – Causes, CBC and peripheral smear findings.
6. Describe the procedure of thick and thin smear preparation and its indications.
7. Mechanism of action and uses of any five anticoagulants used in laboratory.
8. Enumerate the different stains used for bone marrow study and its indications.
9. Microscopic examination of urine- procedure and interpretation.
10. Carnoy's fixative – composition and uses.

Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Properties of an ideal blood smear.
12. Three causes of hematuria
13. Three types of casts found in urine.
14. Three different color changes in urine with its associated condition.
15. Name three types of hemolytic anemia.
16. Three complications of phlebotomy.
17. Write three causes for thrombocytopenia.
18. What is ESR? What are the different methods of calculating ESR?
19. Normal value of hemoglobin in children, adult males and adult females.
20. Order of draw of blood for investigations.
21. Universal safety precautions.