

BSc  
MLT - V

JAN-2024

# BLDE (DEEMED TO BE UNIVERSITY)

## B.Sc. Medical Laboratory Technology

[Time: 3 Hours]

[Max. Marks: 80]

### V SEMESTER

### PAPER - I (Clinical Biochemistry I)

QP CODE: 8530

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

### Long Questions

10X1 = 10 Marks

1. Explain Laboratory automation under following headings – [2+2+2+2+2]
- a. Steps in automated systems
  - b. Types of analyzers
  - c. Selection of autoanalyzer
  - d. Advantages of automation
  - e. Robotics in automation

### Short Essays: (Any – 8)

5 X 8 = 40 Marks

- 2. Name the ketone bodies & explain Ketogenesis.
- 3. Clinically important serum enzymes in diagnosis of diseases
- 4. Lipid storage disorders.
- 5. Name Laboratory accreditation bodies. Explain the process to get the laboratory accredited.
- 6. Define point of care testing. Validation of POCT devices against gold standard test with example.
- 7. Describe functions of thyroid hormones. Mention biochemical investigations for evaluation of hypothyroidism
- 8.  $\beta$ - Oxidation of fatty acid
- 9. Clinical significance of urea & Creatinine
- 10. Digestion & absorption of lipids

### Short Answers: (Any – 10)

3 X 10 = 30 Marks

- 11. Phenylketonuria
- 12. Galactosemia
- 13. List the hormones acting through intracellular receptors
- 14. Internal audit of lab
- 15. Types of analyzers
- 16. Role of carnitine in  $\beta$  – oxidation
- 17. Clinical significance of uric acid
- 18. Name the glycogen storage disorders
- 19. Maple syrup urine disease
- 20. External Quality control
- 21. List cardiac markers

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# BLDE (DEEMED TO BE UNIVERSITY)

## B.Sc. Medical Laboratory Technology

[Time: 3 Hours]

[Max. Marks: 80]

### VI SEMESTER

### PAPER - I (Clinical Biochemistry II)

QP CODE: 8630

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

### Long Questions

10X1 = 10 Marks

1. Describe the functions of calcium, factors affecting absorption of calcium and disorders of calcium metabolism [5+2+3]

### Short Essays: (Any – 8)

5 X 8 = 40 Marks

2. Discuss the sources and steps of Gluconeogenesis.
3. What is the normal blood glucose level? How does the body regulate blood glucose?
4. Describe NABH? Discuss the benefits of NABH for the patients and hospital employees.
5. Write on the Functions of phosphorus in the body.
6. Write a note on tumor markers.
7. Write a note on Microalbuminuria.
8. Explain RFT regarding its clinical utility and normal ranges of tests done under RFT.
9. Define PPE. List all the proper PPE one must wear while working in the lab.
10. Write a note on Blotting techniques.

### Short Answers: (Any – 10)

3 X 10 = 30 Marks

11. Which biochemical tests are routinely measured during CSF analysis? Mention their normal ranges.
12. What is ELISA? Write a note on its uses.
13. Normal ranges for serum calcium and phosphorus.
14. What is meant by the true glucose value of blood?
15. Recombinant DNA technology.
16. What is the clinical significance of  $\beta$ -hCG?
17. What is the CEA test? Mention its clinical significance.
18. Difference between UREA and BUN.
19. Importance of ABG analyzer.
20. What is the procedure when dealing with broken glassware?
21. Clinical significance of A/ G ratio.

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**VI SEMESTER**

**PAPER - II (Medical Microbiology II)**

**QP CODE: 8631**

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

**Long Questions**

**10X1 = 10 Marks**

1. Describe morphology, Life cycle and Laboratory diagnosis of Ascariasis

**Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Laboratory diagnosis of Amoebic dysentery
3. Giardiasis
4. Laboratory diagnosis of Malaria
5. Describe morphology, Life cycle and of Taenia solium
6. Pathogenesis and Laboratory diagnosis of enterobiasis
7. Mention application, advantages and disadvantages of Molecular techniques
8. Quality control in microbiology laboratory
9. Good Laboratory practice
10. General guideline for sample collection and transport for infectious diseases

**Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. Define definitive host and give its examples
12. Enumerate three tissue Nematode
13. Enumerate parasites causing anemia
14. Draw labeled diagram of Trichomonas vaginalis
15. Enumerate three vectors (insects) which transmit parasitic infection
16. Name three Non- Bile-stained Eggs
17. Equipments used in molecular biology Laboratory
18. Material used in PPE
19. Advantages and disadvantages of BACTEC technique
20. Six Organism causing PUO infections
21. Six Organism causing respiratory tract infections

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**VI SEMESTER**

**PAPER - III (Blood Bank & General Pathology II)**

**QP CODE: 8632**

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

**Long Questions**

**10X1 = 10 Marks**

1. Classify anemias. Discuss clinical presentation, investigations and special tests in Macrocytic anemia.

**Short Essays: (Any – 8)**

**5 X 8 = 40 Marks**

2. Cross matching
3. Osmotic fragility test
4. Liver function test
5. Leucocyte Cytochemistry
6. What is Apheresis and its advantages
7. Quality control in Blood center
8. Biomedical waste disposal in blood center
9. Basic questionnaires to be asked before blood donation.
10. Write a short note on chemical examination of urine.

**Short Answers: (Any – 10)**

**3 X 10 = 30 Marks**

11. Uses of HPLC
12. Classify transfusion reactions.
13. What is Supravital stain and its uses
14. Storage temperature for whole blood and various blood components
15. Use of Anti Human globulin reagent in Blood bank
16. Fixatives used in cytology
17. Name the tests for bile salts and bile pigments in Urine
18. What is the meaning of Polyuria, Oliguria and Anuria?
19. Therapeutic phlebotomy
20. Types of urine sample
21. Composition of WBC diluting fluid?