#### **BLDE (DEEMED TO BE UNIVERSITY)**

### **B.Sc.** Medical Laboratory Technology

[Time: 3 Hours]

[Max. Marks: 80]

#### IV SEMESTER

# PAPER - I (Fundamentals of Biochemistry II) QP CODE: 8430

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 importance of various dietary components. Add a note on types & causes of Protein energy malnutrition [4+6]

#### Short Essays: (Any – 8)

5 X 8 = 40 Marks

- 2. Explain the components of respiratory chain in mitochondria.
- 3. Quality Control programmes.
- 4. Name the acid base disorders explain any two in detail
- 5. Explain the PCR technique. Add a note on applications of PCR
- 6. Transamination & Clinical significance of Transaminases
- 7. Detoxification by conjugation
- 8. Describe the steps of protein synthesis (translation)
- 9. What are radioisotopes? Give three examples of radioisotopes and its applications.
- 10. Explain the reactions of biosynthesis of Urea.

#### Short Answers: (Any - 10)

 $3 \times 10 = 30 \text{ Marks}$ 

- 11. Anion gap
- 12. Essential amino acids
- 13. Oxidative phosphorylation
- 14. Name the electrolytes and Reference values for it.
- 15. Genetic code
- 16. Net protein utilization (NPU)
- 17. Radiation health safety and protection.
- 18. Nutritional significance PUFA
- 19. Wobble hypothesis
- 20. Name plasma buffers explain any one.
- 21. Balanced diet

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## B.Sc. Medical Laboratory Technology

[Time: 3 Hours]

[Max. Marks: 80]

#### IV SEMESTER

### PAPER - II (Fundamentals of Microbiology II) QP CODE: 8431

Your answer should be specific to the questions asked. Write Question No. in left side of margin.

#### **Long Questions**

10X1 = 10 Marks

1. Classify Mycobacteria. Discuss Laboratory diagnosis of Pulmonary tuberculosis

#### Short Essays: (Any – 8)

 $5 \times 8 = 40 \text{ Marks}$ 

- 2. Laboratory diagnosis of infection caused by Staphylococcus aureus.
- 3. Widal test
- 4. Laboratory Diagnosis of diphtheria
- 5. Laboratory Diagnosis of Urinary tract infection
- 6. Difference between VDRL and RPR
- 7. Prevention and control of Hospital Acquired Infection
- 8. Shigellosis
- 9. Laboratory Diagnosis of tetanus
- 10. Biomedical waste management

#### Short Answers: (Any - 10)

 $3 \times 10 = 30 \text{ Marks}$ 

- 11. Classification of Streptococci
- 12. Enumerațe infections caused by nocardia
- 13. Enumerate three spores forming bacilli
- 14. Enumerate three Gram negative cocci
  - 15. Enumerate three each Transport and selective media for vibrio cholerae
  - 16. Enumerate three motile gram negative bailli.
  - 17. Morphology of Pneumococci
  - 18. Enumerate infections caused by Klebsiella
  - 19. Enumerate Zoonotic diseases
  - 20. Infections produced by Pseudomonas aeruginosa
  - 21. Enumerate six anaerobic bacteria

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#### **B.Sc.** Medical Laboratory Technology

[Time: 3 Hours]

[Max. Marks: 80]

#### IV SEMESTER

# PAPER - III (Haematology & clinical pathology II) OP CODE: 8432

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 collection, handling of specimen, processing and interpretation of cerebrospinal fluid.

#### Short Essays: (Any – 8)

 $5 \times 8 = 40 \text{ Marks}$ 

- 2. Fixatives in cytology
- 3. Different methods of blood grouping
- 4. Bleeding time principle, procedure and normal range.
- 5. Differences between transudate and exudate
- 6. Color coding of biomedical waste
- 7. Cell block
- 8. Megaloblastic anemia causes and laboratory investigations
- 9. Physical examination of urine
- 10. Steps of tissue processing

## Short Answers: (Any – 10)

 $3 \times 10 = 30 \text{ Marks}$ 

- 11. Name transfusion transmitted diseases.
  - 12. Write three advantages of liquid-based cytology
  - 13. Factors affecting fixation of tissue by formalin
  - 14. Name three tests for proteins in urine
  - 15. Name the steps of H&E staining
  - 16. Procedure of Prothrombin time test.
  - 17. Name three types of casts seen in urine with one cause of each.
  - 18. What is PPE? Give 5 examples
  - 19. Procedure of Leishman staining
  - 20. Interpretation of Benedict's test
  - 21. Write three causes of ascites.