

July 2023

**BLDE (DEEMED TO BE UNIVERSITY)**  
**M.Sc. Allied Health Sciences (Medical Biochemistry)**

[Time: 3 Hours]

[Max.Marks:80]

**IV SEMESTER**

**PAPER – I (Molecular Biology and Genetics)**

**QP CODE: 9056**

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

**Long Questions**

**10X3 = 30 Marks**

1. Discuss Mutations- types, repair mechanisms and the diseases associated with repair mechanisms.
2. Discuss Inheritance -Principles of heredity, Dominant inheritance, Recessive inheritance, X-linked inheritance.
3. Discuss the different types of RNA in detail with respect to structure and function.

**Short Essays:**

**5 X 10 = 50 Marks**

4. Explain what are Introns and exons.
5. Define operon. Explain the lac operon concept.
6. Reverse transcriptase.
7. Lesch Nyman syndrome- clinical features and biochemical basis of the clinical features.
8. Heat shock proteins.
9. ~~Oncogenes and proto-oncogenes.~~ *Genetical code*
10. Plasmids and Cosmids.
11. Inhibitors of protein synthesis.
12. Chromosomal recombination.
13. Point Mutations and Frame shift Mutations.

Poly - 2023

# BLDE (DEEMED TO BE UNIVERSITY)

## M.Sc. Allied Health Sciences (Medical Biochemistry)

[Time: 3 Hours]

[Max.Marks:80]

### IV SEMESTER

### PAPER – II (Clinical Biochemistry and Biochemical Techniques)

QP CODE: 9057

Your answer should be specific to the questions asked.

Write Question No. in left side of margin.

#### Long Questions

10X3 = 30 Marks

1. Discuss the technique of in situ hybridization and add a note on the probes and labeling techniques used and give the important applications of the technique.
2. Autoanalyser: Principle, working System, Types and applications.
3. Explain the technique of ELISA and discuss the types and applications in detail.

#### Short Essays:

5 X 10 = 50 Marks

4. Northern blotting technique and applications.
5. Discuss the steps in polymerase chain reaction (PCR).
6. Application of Immuno-electrophoresis.
7. What is ultracentrifugation? Give the applications.
8. DNA fingerprinting.
9. Write a note on Restriction fragment length polymorphism (RFLP).
10. Applications of Tandem mass spectroscopy.
11. DNA microarray.
12. Steps in Maxim Gilbert Technique of DNA sequencing.
13. Define and list the uses of High Performance Liquid Chromatography.