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**24-BC-41**

**M.Sc. IV SEMESTER [MAIN/ATKT] EXAMINATION  
JUNE - JULY 2024**

**BIOCHEMISTRY**

Paper - I

**[Molecular Biology]**

*[Max. Marks : 75]*

*[Time : 3:00 Hrs.]*

*[Min. Marks : 26]*

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**Note :** Candidate should write his/her Roll Number at the prescribed space on the question paper.  
Student should not write anything on question paper.  
Attempt five questions. Each question carries an internal choice.  
Each question carries **15 marks**.

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**Q. 1** Discuss organization of the DNA in the nuclear material.

**OR**

Explain following -

- i) Gene Concepts.
- ii) Modifications of Histones.

**Q. 2** Discuss salient features of replication of Eukaryotic nuclear DNA.

**OR**

Explain following -

- i) DNA Polymerase.
- ii) Initiation of replication in Prokaryotes.

**Q. 3** Explain mechanism of transcription in bacteria.

**OR**

Discuss following -

- i) Post transcriptional processing of RNA.
- ii) RNA polymerase.

**Q. 4** Discus following -

- i) Genetic Code.
- ii) tRNA

**P.T.O.**

**OR**

Explain mechanism of translation in Prokaryotes.

**Q. 5** Discuss mechanism of Lac Operon.

**OR**

Explain followings -

- i) Types of Operon.
- ii) Regulation of Gene expression in Eukaryotes.

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