

M.Sc. (Part - I) (Biotechnology) (CBCS Pattern) Semester - I  
**PSBIT104 - Paper-IV : Molecular Biology**

P. Pages : 1

Time : Three Hours



**GUG/S/23/11149**

Max. Marks : 80

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- Notes : 1. All questions are compulsory and carry marks as indicated.  
2. Draw diagram wherever necessary.

1. Explain the mechanism of DNA replication in detail. **16**

**OR**

- a) Explain physical and chemical mutagens involved in mutation. **8**  
b) Write a note on BER. **8**

2. Describe in detail process of transcription and its regulation. **16**

**OR**

- a) Discuss three types of RNA polymerases. **8**  
b) Write a note on Packaging of chromosomes. **8**

3. Describe Eukaryotic translation process in detail. **16**

**OR**

Write note on followings.

- a) Deciphering the genetic code. **8**  
b) Post translation modification of protein. **8**

4. Describe conjugation in bacteria in detail. **16**

**OR**

- a) Give note on C-value paradox. **8**  
b) Give note on extra chromosomal inheritance. **8**

5. Write notes on:

- a) Repair of double strand breaks. **4**  
b) Britten-Davidson model. **4**  
c) Couple transcription translation. **4**  
d) transformation of gene. **4**

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