

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

P. Pages : 1

Time : Three Hours



**GUG/W/23/11149**

Max. Marks : 80

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1. Explain in detail about DNA replication in Prokaryotic cell. 16

**OR**

a) Explain Messelson and Stahl experiment of semi-conservative replication. 8

b) Describe DNA repair mechanism. 8

2. Describe Prokaryotic transcription in detail. 16

**OR**

a) Explain Lac Operon in detail. 8

b) Explain modification of RNA. 8

3. Explain process of translation in Prokaryotes. 16

**OR**

a) Describe the Genetic code. 8

b) Explain the post translational modification of protein. 8

4. Discuss in detail about conjugation in bacteria. 16

**OR**

a) Discuss about the C-value paradox. 8

b) Give salient features of the E.coli genetic map. 8

5. Write notes on:

a) Repair of double strand breaks. 4

b) Three types of RNA Polymerase in Eukaryotes. 4

c) Couple transcription & translation. 4

d) Regulatory Gene. 4

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