

M.Sc.(Microbiology) CBCS Pattern Semester-III  
**PSMBT-09 - Paper-I : Genetics and Molecular Biology**

P. Pages : 1

Time : Three Hours



**GUG/W/23/11291**

Max. Marks : 80

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Notes : 1. All the questions are compulsory and carry equal marks.

1. Describe in detail the process of replication in prokaryotes. **16**

**OR**

a) What is DNA repair? Explain BER NER. **8**

b) Explain termination of replication. **8**

2. Describe the process of translation in detail. **16**

**OR**

Write notes on:

a) Characteristics of genetic code. **8**

b) Initiation, elongation and termination of mRNA synthesis. **8**

3. Give the concept of operon. Explain in detail with suitable example. **16**

**OR**

Write notes on:

a) Autogenous central of r-proteins. **8**

b) P32 translational regulation. **8**

4. Discuss the mechanism of Transformation with Griffith's experiment. **16**

**OR**

Write note on:

a) Mapping bacteriophage gene by recombination analysis. **8**

b) Preliminary concept of genetic recombination. **8**

5. Write a short notes on:

a) Subunits of DNA Pol III. **4**

b) RNA Editing. **4**

c) Discuss Arabinose operon. **4**

d) Retroposons. **4**

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