

M.Sc.(Microbiology) (NEP Pattern) - Semester-III
STPG03MCB001 - Paper-I : Genetics and Molecular Biology

P. Pages : 1

Time : Three Hours



GUG/W/24/16123

Max. Marks : 80

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- Notes : 1. All questions are compulsory.
2. Draw the diagram wherever it is necessary.

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

OR

- a) Discuss DNA repair in detail. **8**
b) Discuss Photoreactivation in detail. **8**

2. Discuss Intrinsic & extrinsic mechanisms of transcription termination. **16**

OR

Explain in detail-

- a) Promoter classes I, II, III. **8**
b) Post transcriptional control of gene expression. **8**

3. Explain operon concept with respect to Lac-operon model in detail. **16**

OR

Add a detailed note on-

- a) Chromatin remodeling. **8**
b) p32 control **8**

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

OR

Give an detailed account on-

- a) Mapping bacteriophage gene by recombination analysis. **8**
b) Preliminary concept of genetic recombination. **8**

5. Write a notes on-

- a) DNA repair by photoreaction. **4**
b) RNA Editing. **4**
c) Chromatin remodeling **4**
d) Conjugation **4**
