

M.Sc. (Bio-Chemistry) (NEP Pattern) Semester-II
STPG02BCH01 - Molecular biology

P. Pages : 2

Time : Three Hours



GUG/S/25/16389

Max. Marks : 80

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- Notes :
1. All questions are compulsory.
 2. Draw neat and labelled diagram whenever necessary.
 3. All questions carry equal marks.

1. Discuss in detail structure of eukaryotic chromosomes. **16**

OR

i) Write a note on E.Coli Chromosome. **8**

ii) What is mutation? Discuss nonsense and missense mutation. **8**

2. Discuss in detail initiation and elongation process of DNA replication in prokaryotes. **16**

OR

i) Discuss nucleotide excision repair. **8**

ii) Discuss homologous recombination. **8**

3. Discuss in detail eukaryotic transcription. **16**

OR

i) Write a detail note on Promoter. **8**

ii) Discuss DNA Polymerases use in prokaryotic DNA transcription. **8**

4. Discuss in details initiation and elongation of protein synthesis. **16**

OR

i) Discuss post translational modification. **8**

ii) Discuss features of genetic code. **8**

5. Attempt **any eight** from following. **8x2 =16**

a) What is function of centromere?

- b) What is function of telomer?
- c) Which protein essential for packaging of chromatid?
- d) What is site specific recombination.
- e) Name any two DNA repair enzyme.
- f) What is gene targeting?
- g) What is catalytic RNA?
- h) What is gene silencing?
- i) What is splicing?
- j) What is anticodon? Give one example of codon-anticodon pairing.
- k) Name the loop where amino acid bind to t-RNA.
- l) Give one example of co-translational process.
