2021

Microbiology

[HONOURS]

(CBCS)

(B.Sc. Third SemesterEnd Examinations-2021)

PAPER-C7T

Full Marks: 40 ***Time: 02 Hrs***

The figures in the right hand margin indicate marks
Candidates are required to give their answers in their own words as far as practicable
Illustrate the answers wherever necessary

Group-A

Answer anyfive from the following: 5x2= 10

1. What is linking number? 2
2. What is genetic code? 2
3. What is the role of the promoter region in the regulation of gene expression? 2
4. What is split gene? 2
5. What is siRNA? 2
6. What do you mean by positive and negative regulation? 1+1
7. Define inducible operon with example. 1+1
8. Mention the role of DNA gyrase in DNA replication. 2

Group-B

Answer any fourfromthe following: 4x5 = 20

1. a) Write down the Watson and crick model of DNA double helix.
   b)Write down the mechanism of Semiconservative replication. 3+2
2. a) Write down the mechanism of mismatch repair.
   b)State the role of topoisomerase on DNA replication. 3+2
3. State the role of transcription factors in RNA synthesis. 5
4. a) Write briefly on rolling circle model of replication.
   b)What is C value paradox? 4+1
5. a) How many stem loop structures do play important role in complete system of genetic regulation for tryptophan biosynthesis?
   b)Write down the attenuation model of trp operon. 2+3
6. a) Give a brief account of shine Dalgerno sequence.
   b) What is the final factors required to release the peptide and ribosome? 2+3

Group -C

Answer any one of the following : 10x1 = 10

1) a) Describe the importance of polyadenylation and copping eukaryotic mRNA.
   b) What is intron? 4+2+4

2) a) Write down the mechanism of excision repair.
   b) Write briefly on DNA methylation.
   c) Discuss the elongation process in protein synthesis. 4+2+4
