

2018

CBCS

3rd Semester

MICROBIOLOGY

PAPER—C7T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Molecular Biology

1. Answer any five questions : 5×2
- (a) Write the salient features of B-DNA model. How it differ from Z-DNA ? 1+1
- (b) What is semiconservative replication ? 2

- (c) What do you mean by polycystronic mRNA? 2
- (d) State the significance of mi-RNA. 2
- (e) Write the role of aminoacyl t-RNA synthatase in translation. 2
- (f) Write the mode of action of puramycin. 0
- (g) What is Wobble hypothesis? 2
- (h) What is operon? 2
2. Answer any *four* questions : 4×5
- (a) What is heterochromatin? How it differ from enchromatin? 2+2
- (b) Write short note on :
- (i) RNA polymerase
- (ii) Polyadenylation of RNA. 2+2

- (c) State about the factor with their role in transcription. 4
- (d) Briefly mention the attenuation control of trp-operon.
What is the role of histone acetylase? 3+1
- (e) Schematically represent the nucleotide excision repair system. 4
- (f) What are the extrachromosomal DNA found in prokaryotes and eukaryotes. State their role. 2+2

3. Answer any one question : 1×10

- (a) Write a note on secondary structure of t-RNA. Differentiate between rolling circle and theta mode of DNA replication. What is Okazaki fragment? 5+3+2
- (b) Write the process and significance of DNA methylation. Schematically represent the process of initiation of translation. What is Amber codon? (3+2)+4+1