

Code No. 272

FACULTY OF SCIENCE
B.Sc. II-Semester (CBCS) Examination, May / June 2017
Subject : Bio-Technology.

Paper – II : Nucleic Acids and Bioinformatics**Time : 3 Hours****Max. Marks: 80**

PART – A (5 x 4 = 20 Marks)
(Short Answer Type)

Note : Answer any FIVE of the following questions.

- 1 C-value and C-value paradox
- 2 SINES & LINES
- 3 Rolling circle replication
- 4 Homologous recombination
- 5 Gen Bank database
- 6 BLAST
- 7 Phylogenetics
- 8 Structural classification in of proteins

PART – B (4 x 15 = 60 Marks)
(Essay Answer Type)

Note: Attempt ALL the questions.

- 9 (a) Write in detail how DNA was established as a genetic material with illustrations.
OR
(b) Briefly describe the prokaryotic gene organization.
- 10 (a) Define mutations and briefly describe the molecular basis of mutations.
OR
(b) Explain the three types of repair mechanisms with illustrations.
- 11 (a) What are databases? Explain using protein data banks.
OR
(b) Write about internet and its role in Bioinformatics.
- 12 (a) Explain how pair wise alignment is carried out.
OR
(b) Write in detail about homology modeling and its uses in biology.
