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.

****