

1209-17-488-003

Code No. 7041

FACULTY OF SCIENCE
B.Sc. II-Semester (CBCS) Examination, May / June 2018

Subject : Biotechnology

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 Describe Tobacco Mosaic Virus (TMV).
- ✓ Write in brief about transposable elements.✓
- ✓ Distinguish between transition and transversion.✓
- ✓ Discuss mismatch repair mechanism.✓
- ✓ What are UNIPROT and PIR? Write about their utilization.✓
- 6 Distinguish between pBLAST and nBLAST
- 7 Define gap and gap penalty.
- ✓ What is genome annotation? Write about gene identification tools.✓

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

Note: Answer all the questions.

- 9 (a) Describe in detail about Griffith's experiment on transformation.✓
OR
(b) Write in detail about the organization of eukaryotic genes.
- 10 (a) Explain in detail about semi-conservative mode of DNA replication.✓
OR
(b) What is mutagen? Explain in detail about spontaneous and induced mutations.
- 11 (a) Define Bioinformatics. Discuss the scope of Bioinformatics.
OR
(b) Explain in detail about biological database and their importance with examples.
- 12 (a) Write in detail about the protein structure prediction.
OR
(b) Describe the role of bioinformatics in identification drug targets and drug designing.
