

P-260

B. Sc. Biotechnology III Year Examination, 2018

GENOMICS AND PROTEOMICS

Paper : XIII

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt all questions from Section – A, eight questions from Section – B and two questions from Section – C

SECTION – A

[Marks : 5 × 3 = 15

1. What are endonuclear or restriction enzyme which type of restriction enzyme used in r-DNA technology and why ?
2. Write a short notes on Genome evolution.
3. What is DNA fingerprinting ?
4. Name some Genome databases.
5. Write a short note on human genome.

SECTION – B

[Marks : 8 × 5 = 40

1. What are AFLPs ? How can these be used for genetic studies ?
2. Describe restriction mapping with example.
3. Write the similarities and dissimilarities between Microarray analysis and Southern hybridization.
4. Write down the basic principle of protein structure.
5. Write the steps to design a desired protein.
6. How do we analyse the protein sequences using databases ?
7. How can you test homology modeling on mutant proteins ?

P. T. O.

P-260

8. Briefly explain the origin of introns and their role in eukaryogenesis.
9. Write a note on Gene Dig. a web application for accessing genomics.
10. Write down the edman degradation procedure for protein sequencing.

[Marks : 2 ×

SECTION – C

1. Describe the challenges in the computational design of proteins.
 2. Explain the various methods of Nucleic acid sequencing.
 3. Explain the various methods to evaluate the protein structure.
-