

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
B.Sc, Winter 2017-18 Examination

Semester: 5
Subject Code: 11102305
Subject Name: Omics Technologies

Date: 15/12/2017
Time: 02:00 pm to 04:30 pm
Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Answer the following (Each of 04 marks) (08)**
(a) What is ENTREZ? Describe its purpose.
(b) Explain in detail 'Types of Genetic Markers'
- Q.1. B) Answer the following questions (Any two) (04)**
(a) Answer the following (Each of 02 marks) (04)
1. Mention any two methods to study Protein-Protein interaction.
2. Mention any two methods to study Protein-DNA interaction.
(b) Nucleic acids (DNA/RNA) can be resolved by Agarose Gel Electrophoresis and Polyacrylamide Gel Electrophoresis. Is it True or False? (04)
(c) Give the names of two Direct Protein Sequencing methods. (04)
- Q.2. A) Answer the following questions. (04)**
(a) Answer the following (Each of 02 marks) (04)
1. What do HDAC and SAGE stand for?
2. Define what is RFLP and VNTR.
(b) Define MALDI and inform its application. (04)
- Q.2. B) Answer the following questions (Any two) (03)**
(a) Answer the following (Each of 01 marks) (03)
1. Give the name of any one Protein domain?
2. In the field of Epigenetics what does 'HAT' stand for?
3. 'SNP' analysis in Genomics stands for _____.
(b) Give the names of three types of Microarray assays (03)
(c) Write a short note on 'Polymerase Chain Reaction'. (03)
- Q.3. A) Answer the following (Each of 04 marks) (08)**
(a) Write an Essay on ENSEMBL.
(b) Describe in detail the concept and types of 'Omics Technologies'.
- Q.3. B) Answer the following questions (Any two) (04)**
(a) Answer the following (Each of 02 marks) (04)
1. Explain the role of Protein Sequenator?
2. Mention any two applications of Genetic markers in Cereal Breeding.
(b) Write a note on SWISS-PROT. (04)
(c) What is 'tblsn'? Explain briefly. (04)
- Q.4. A) Answer the following questions. (04)**
(a) Answer the following (Each of 02 marks) (04)
1. What does DDBJ stand for? Explain briefly.
2. Explain the terms 'Bankit' and 'Sequin'. In what context are they used?
(b) Mention any two applications of Genetic markers in Cereal Breeding. (04)
- Q.4. B) Answer the following questions (Any two) (03)**
(a) Answer the following. (Each of 01 marks) (03)
1. Give the full form of TIGR
2. Give the full form of DDBJ
3. Give the full form of BLAST
(b) Enlist the promises of NCBI (03)
(c) Describe what is 'The Arabidopsis Information Resource'. (03)