

**Sr. No. 2451**

**Exam Code: 206603**

**Subject Code: 3650**

**M.Sc. Bio-Informatics - 3rd Sem.**

**(2118)**

**Paper: BI-631**

**Genomics & Proteomics**

**Time allowed: 3 hrs.**

**Max. Marks: 75**

**Section A**

**Section A is compulsory.**

**Explain the following in not more than four lines**

**1.5X10 = 15**

- |                          |                     |
|--------------------------|---------------------|
| 1) Transposable elements | 2) RFLP             |
| 3) Genome map            | 4) Pharmacogenomics |
| 5) Nucleosome            | 6) Proteomics       |
| 7) COG                   | 8) Cytoscape        |
| 9) STS                   | 10) GRID            |

**Section B**

**Answer one question from each unit.**

**5X4 = 60**

**Unit 1**

- 1) What are pseudogenes? Discuss gene structure of human gene.
- 2) What are genetic and physical genome maps? Discuss application of genome map.

**Unit 2**

- 3) What is comparative genomics? Discuss how bioinformatics tools help in comparative genomics study.
- 4) What do you understand by genome alignment tool? Explain MUMmer.

**Unit 3**

- 5) What is comparative proteomics? Discuss principle and application of differential 2D gels.
- 6) Discuss how bioinformatics tools are used in proteomics studies.

**Unit 4**

- 7) What are protein-protein interaction network? Explain different sources of protein-protein interaction data.
- 8) What is interactome? Discuss InterPreTS and its significance.

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