

**M. Sc. Bioinformatics Sem.-II (C.B.C.S.) (2013 Course) / Advanced
Diploma in Bioinformatics Sem.-II (C.B.C.S.) (2013 Course) :**
WINTER - 2018

SUBJECT: GENOMICS AND PROTEOMICS

Day: Friday
Date: 26/10/2018

W-2018-1258

Time: 02.00 PM TO 05.00 PM
Max Marks: 60

N.B.:

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of the remaining, attempt **ANY TWO** from each Section.
 - 2) Each section should be solved in **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
 - 4) Draw neat labeled diagrams **WHENEVER** necessary.
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SECTION I

- Q.1** Explain the principal of: **(10)**
- | | |
|-----------------------|-----------|
| a) Sanger sequencing | b) PCR |
| c) DNA fingerprinting | d) BLAST2 |
| e) Pipmaker | |
- Q.2** Answer the following: **(10)**
- a) What is third generation sequencing? Explain any one method in brief.
 - b) What was the basic idea behind HGP? Explain its outcomes.
- Q.3** Write short notes on: **(10)**
- | | |
|------------------------|--------------------------|
| a) Structural Genomics | b) Genomic Data Browsers |
|------------------------|--------------------------|
- Q.4** Give an account of comparative genomics of organisms. **(10)**
- OR**
- Explain the concept of pharmacokinetics in detail. Give emphasis on ADMET properties.

SECTION-II

- Q.5** Define: **(10)**
- | | |
|-----------------|---------------|
| a) IEF | b) PAGE |
| c) Protein chip | d) InterPreTS |
| e) GRID | |
- Q.6** Answer the following: **(10)**
- a) Write a note on protein separation techniques.
 - b) How do you analyze images in 2D gels? Explain.
- Q.7** Write short notes on: **(10)**
- | | |
|----------------------|-----------------------|
| a) Mass Spectrometry | b) Protein Sequencing |
|----------------------|-----------------------|
- Q.8** What are protein-protein interactions? How do you analyze it? Explain with example. **(10)**
- OR**
- Write in brief on DIP and MINT.