**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

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**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.

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