

**M. SC. BIOINFORMATICS SEM.-II (C.B.C.S.) (2013 COURSE) /  
ADVANCED DIPLOMA IN BIOINFORMATICS SEM.-II  
(C.B.C.S.) (2013 COURSE) : WINTER - 2017  
SUBJECT : GENOMICS & PROTEOMICS**

Day : **Tuesday**  
Date: **07/11/2017**

Time: **10.00 AM TO 01.00 PM**  
Max Marks. **60**

**W-2017-1014**

**N.B.**

- 1) **Q. 1 and Q. 5** are **COMPULSORY**. Out of the remaining questions solve any **TWO** from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Both the sections should be written on **SEPARATE** answer sheets.
- 4) Draw neat labeled diagram **WHEREVER** necessary.

**SECTION – I**

- Q.1** Explain in shorts: (10)
- a) PCR
  - b) DNA Sequencing methods.
  - c) Tools used in Genomic Data Mining
  - d) MUMmer
  - e) COG
- Q.2** Answer the following : (Any TWO) (10)
- a) Give names of Genome databases. Explain any one database in brief.
  - b) Explain annotation strategies used in genomics.
  - c) Write a note on Human Genome Project and its importance.
- Q.3** Answer the following : (Any TWO) (10)
- a) Differentiate between structural genomics & functional genomics.
  - b) Write a note on OMIM.
  - c) Explain signal sequence prediction methods.
- Q.4** Write a short notes on: ( Any TWO) (10)
- a) Role of cytochrome P<sub>450</sub> in Pharmacokinetics.
  - b) Gene synteny
  - c) VISTA
  - d) Virus genomic database
  - e) HOBACGEN

**SECTION - II**

- Q.5** Differentiate with the help of two points: (10)
- a) PAGE & SDS - PAGE
  - b) Ion exchange & size exclusion chromatography
  - c) Genomic & Proteomic databases
  - d) Proteomics & Genomics
  - e) PIM and InterpreTS
- Q.6** Write short notes on : (Any TWO) (10)
- a) Affinity chromatography
  - b) Image analysis of 2D gels
  - c) Scope of proteomics
- Q.7** Answer the following : (Any TWO) (10)
- a) Explain protein sequencing method in short
  - b) Write briefly on protein engineering.
  - c) Enlist clinical & biomedical applications of proteomics
- Q.8** Explain any TWO database (10)
- a) DIP
  - b) PPI server
  - c) MINT
  - d) GRID

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