

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 P₄₅₀ 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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