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**SARDAR PATEL UNIVERSITY
EXTERNAL EXAMINATION**

DAY-Tuesday , DATE - 19/11/13

TIME:02:30- 05:30 P.M. Course: US03CBNF04

SUBJECT: Basics in Bioinformatics

CLASS- S.Y.B.Sc SEMESTER-III

MAX. MARKS- 70

O1- Select the correct from the following Multiple Choice: [1 X 10]

[10]

- 1) It is a simple type of Database based on ordering and indexing.
a) Flat file indexing system c) Object oriented database
b) RDMS d) None
- 2) The sequence of the first protein analysed by F.Sanger was
a) Bovine insulin c) Protease
b) Myosin d) Actin
- 3) Abbreviation for MeSH is
a) Medical Social Headquater c) Medical Subject Heading
b) Medicine Subject Heading d) Medical Similar Heading
- 4) PubMed is a free database accessing primarily information from
a) Genbank c) Medline
b) Google d) Internet
- 5) Online Mendelian Inheritance in Man (OMIM) is
a) Software c) database that catalogues all the known diseases & genes
b) Search Engine d) database that catalogues the entire known chromosome.
- 6) Fasta format starts from the sign-
a) < c) @
b) > d) *
- 7) The names and phylogenetic lineages of organisms present in
a) MeSH c) Taxonomy
b) OMIM d) PMC
- 8) The abbreviation for PIR is
a) Protein Information Resource c) Protein Institute Resource
b) Protein Information Research d) Protein Institute Research
- 9) Tr EMBL contains information about:
a) Protein sequence c) Nucleotide sequence
b) Protein classification d) Protein structure
- 10) The identification of drugs through genomic study
a) Genomics b) Cheminformatics c) Pharmagenomics d) Phrmacogenetics

[P.T.O]

Q2— Answer the Short Questions: (Attempt Any Ten)

[20]

- 1] Explain the significance of internet in bioinformatics.
- 2] Discuss the importance of search engine .
- 3] Describe the role of database in biology.
- 4] Differentiate PubMed and PMC (PubMed central).
- 5] Differentiate EMBL and TrEMBL.
- 6] Give the important features of Swiss-Prot.
- 7] Enlist any four bioinformatics databases.
- 8] Give the abbreviation of OMIM, PIR, SCOP, MMDB.
- 9] What information is present in database OMIM.
- 10] Explain PDB ID.
- 11] Give the important features of database PDB.
- 12] Differentiate PDB and Swiss PROT database.

Q3 (a) What is bioinformatics. Discuss in brief the history of bioinformatics. [6]

Q3(b) Discuss few important websites in Bioinformatics. [4]

OR

Q3 What is a freeware software and how it differ from shareware software explain with examples. [10]

Q4 (a) Explain biological databases in detail and discuss primary and secondary databases with examples. [6]

Q4 (b) Explain Flat file database system. [4]

OR

Q4 Explain different types of biological databases and its importance in bioinformatics. [10]

Q5 Explain Genbank database format. [10]

OR

Q5 Explain Swiss Prot database format. [10]

Q6 (a) Explain SCOP Database in detail. [5]

(b) Write PDB Format. [5]

OR

Q6 (a) Explain CATH database. [5]

(b) Write about MMDB Database. [5]

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