

Question Bank

1. Match the columns:

i)	BankIT	Margaret O. Dayhoff
ii)	Composite database	EMBL
iii)	Atlas of Protein Sequence and Structure	MetaCyc
iv)	Microarray database	OWL
v)	FASTA	NCBI
vi)	Stephen Altschul	Global sequence alignment
vii)	Needleman and Wunsch	BLOSUM
viii)	Margaret Dayhoff	Local sequence alignment
ix)	Smith and Waterman	BLAST
x)	Henikoff and Henikoff	PAM

2. Expand the following:

- i) GEO
- ii) MSD
- iii) SCOP
- iv) KEGG
- v) EST
- vi) CADD
- vii) OMIM
- viii) NIH
- ix) SNP
- x) EST
- xi) PHYLIP
- xii) QSAR
- xiii) OUT
- xiv) PDB
- xv) EBI
- xvi) SCOR
- xvii) SRS
- xviii) DDBJ

3. Define:

- i) Bootstrap
- ii) Query
- iii) Outgroup
- iv) Annotation
- v) Cheminformatics
- vi) Refseq
- vii) Affine Gap Penalty
- viii) Scoring Matrix
- ix) Xenologous

- x) Genomics
- xi) ClustalX
- xii) Phylogram
- xiii) Gap penalty
- xiv) Uniprot
- xv) Scoring matrix
- xvi) Annotation
- xvii) Docking
- xviii) Jackknife

4. Give an example of each:

- i. Metabolic database
- ii. Composite database
- iii. Chemical database
- iv. Disease database
- v. Gene expression database

5. Differentiate between the following:

- a. Primary and secondary database
- b. BLASTx and BLASTn
- c. BankIT and Sequin
- d. Accession number and Version number
- e. FASTA and BLAST
- f. Primary database and Secondary database

6. Write short notes on:

- a. Salient features of Swiss-Prot
- b. Resources of DDBJ
- c. Sequence submission to EMBL
- d. Branches of bioinformatics
- e. Aims and scope of Bioinformatics
- f. Structural databases
- g. Organization of SRS library

7. Long questions:

- a. Give an account of various resources available at DDBJ.
- b. Give a brief account of information available in biological databases.
- c. Elaborate sequence retrieval system of NCBI.
- d. Provide an overview of bioinformatics use in biology.
- e. Write characteristic features of PIR.
- f. What are biological databases and discuss their salient features
- g. Briefly describe sequence retrieval tools of NCBI.
- h. What is EMBL? Discuss the organization of databases at EMBL.
- i. Discuss the salient features of Swiss-Prot.
- j. Discuss briefly about different types of BLAST.

- k. What is DDBJ? Give an account of various resources available at DDBJ.
- l. What are Biological databases? Write its salient features and ways in which it can be classified.
- m. Write characteristic features of PIR.