

COMPUTER APPLICATION IN BIOLOGY

UNIT I:

Introduction to Bioinformatics – scope and application – Characteristic of hardware and software. Types of computer, Bio-chips, computer network sending and receiving e-mail, Internet- browsing – searching biological articles information in internet.

UNIT II:

Computer application in biology – uses of databases in biology – Analysis of proteins and nucleic acid sequences – molecular modelling.

UNIT III:

Introduction to data processing – files – data collection – preparation – editing – backup – file recovery – procedure – sorting, searching and merging.

UNIT IV:

Fortran Programme, Basic, design control statements – assignment statements – integer and real constants – variable – expression.

UNIT V:

Windows fundamentals, Introduction to FOXPRO – database creation, insertion, deletion and modifications – managing multiple database – memory variables – data, time string and math functions – report generations. Web browsing, downloading. Preparation of files and file transfer.

REFERENCE:

1. Molecular database for protein sequence and structure studies by Sillince, JA and Sillince (1991). Springer verlag.
2. Sequence Analysis primer by M.Gribskov, J. Devereus (1989) Stockton press.
3. Nueleic acid and protein sequence analysis. A Practical approach by M.J. Bishop and C.J.Ramslings (1987) IRL Press.
4. Information theory and living systems by L.I, Garfield (1992) Columbia university press.
5. Illustrated Foxpro – Granillo – BPB pub.
6. Introductin to data processing – N.C.C. pub.
7. Mastering dataprocessing – J. Bingham macmillar master series.
8. Programming in FORTRAN. Rajaraman. Ved. Prentice Hall 1983.
9. Programming with FORTRAN – Seymour Lipschuts and Arthur Poe Schaum Series –1982.
10. Computer today – S.K. Basandra – galgortia publications.