

2012

B.Sc. (Hons.) Bio-Informatics

Fifth Semester

BIN-5002: Fundamentals of Genomics

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. I which is compulsory and selecting atleast two questions from each Unit.

x-x-x

I. Answer the following:-

- a) Define Tandem repeats? (3)
- b) Differentiate between contigs and scaffold? (3)
- c) Briefly discuss Fly Base? (2)
- d) Difference between manual and automated sequencing methods? (2)
- e) Briefly explain Pyrosequencing? (2)

UNIT - I

- II. a) What are the goals of Human Genome project?
b) Explain the ELSI of Human Genome Project? (2x6)
- III. a) What is 454 sequencing in detail?
b) Explain Chain termination method? (2x6)
- IV. a) Explain Maxam and Gilbert method of sequencing?
b) What are SNPS and their importance? (2x6)

UNIT - II

- V. Write notes on the following:-
 - a) *De novo* and Reference Genome assembly
 - b) Genome assembly software (9,3)
- VI. a) Explain Clone by Clone sequencing method?
b) Discuss any two model organismal genomes and databases (2x6)

P.T.O.

(2)

VII. Write notes on the following:-

a) VISTA

b) ENSEMBL

c) UCSC genome browser

(3x4)

x-x-x