

Time allowed: 3 Hours

Max. Marks: 60

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Give answer in a very short:-

- a) What is Genome?
- b) Give names of agencies which are responsible for Human genome sequencing.
- c) Write the names of sequencing techniques used for first human genome sequence.
- d) Genome coverage.
- e) Non-coding regions?
- f) What is the Solexa?
- g) Jumping gene.
- h) Give names of two tools used for assembly of genome sequencing.
- i) Give names of two genome browser.
- j) *De nova* assembly of genome.
- k) What is the 454?
- l) SNP.

(12x1)

UNIT - I

II. a) Briefly describe the history of first human genome sequencing.

b) What are the main structural features of human genome?

(2x6)

III. a) Write about the genome annotation and its significance.

b) Describe in brief about the method of Sanger genome sequencing.

(2x6)

IV. a) Briefly describe pyrosequencing and its significances.

b) Write a short note on SNPs and their roles in genomics.

(2x6)

P.T.O.

UNIT - II

- V. a). Write in brief about two computer tools used for human sequencing project.
b) Write a short note on *Denova* genome assembly. (2x6)
- VI. a) Explained in brief about the reference genome and its utility.
b)-Describe the ENSEMBL and its role in managing genomic data. (2x6)
- VII. a) Write a short note on Web based servers for genome analysis.
b) What is the NCBI genome? (2x6)

x-x-x