

2012
B.A./B.Sc. (General) Fifth Semester
Bioinformatics
BNE-IX-5001: Introduction to Genomics

Time allowed: 3 Hours

Max. Marks: 67

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

x-x-x

I. Answers the following :-

- a) What are non coding regions?
- b) What are jumping genes?
- c) When did human genome project culminate?
- d) What is human haploid reference genome?
- e) What is PCR?
- f) Define tiling path.
- g) What are VNTRs?
- h) What is a contig?
- i) Define dideoxynucleotides?
- j) What is the difference between SNP and mutation?

(10x1½)

UNIT - I

- II. Discuss different types and role of repeat sequences in human genome. (13)
- III. Discuss the role of different genetic markers in the success of human genome project. (13)
- IV. Discuss the procedure for Shotgun sequencing method. (13)
- V. Discuss the procedure for Sanger's chain termination sequencing method. (13)

UNIT - II

- VI. Describe the basis of DNA sequencing employing capillary electrophoresis and its advantage over conventional gel based method. (13)

P.T.O.

(2)

- VII. Discuss the technique for Phred quality score assessment and its significance. (13)
- VIII. Discuss the Maxam and Gilbert method of chemical degradation method for DNA sequencing. (13)
- IX. Discuss the different types and applications of Single nucleotide polymorphisms. (13)

x-x-x

C4KNOWLEDGESEEKERS