

CBCS SCHEME

15BT72

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Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019

Genomics and Proteomics

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is Polymorphism? Explain different types of polymorphism. (08 Marks)
b. Explain Sanger's method of DNA sequencing. What was the major drawback of this method? (08 Marks)

OR

- 2 a. Describe Maxam Gilbert method of sequencing. (08 Marks)
b. Describe the salient features of Arabidopsis thaliana genome project. (08 Marks)

Module-2

- 3 a. What is EST? Explain the methods of construction of 3' and 5' EST database. (08 Marks)
b. What is Protein array? Explain the construction of protein array chip. (08 Marks)

OR

- 4 a. What is Comparative and functional genomics? (08 Marks)
b. Explain the role of drosophila in functional genomics. (08 Marks)

Module-3

- 5 a. Define and elaborate on C – value of genome. (08 Marks)
b. Outline the organization of genome within mitochondria. (08 Marks)

OR

- 6 a. Enumerate the architecture of prokaryotic genome. (08 Marks)
b. Explain regulation of transcription with respect to coordination of gene expression. (08 Marks)

Module-4

- 7 a. Discuss on the Genetic and Physical maps. (08 Marks)
b. Outline the importance of Marker assisted selection. (08 Marks)

OR

- 8 a. Write explanatory note on RFLP. (08 Marks)
b. Outline the steps involved in SCAR marker preparation as a tool in Molecular mapping. (08 Marks)

Module-5

- 9 a. Outline the steps involved in Merrifield synthesis of peptides. Add a note on its application. (08 Marks)
b. Write explanatory note on Mass spectrometry based analysis of protein expression. (08 Marks)

OR

- 10 a. Discuss in detail two dimensional PAGE for Proteome analysis. (08 Marks)
b. Explain the role of Proteome analysis to drug development and toxicology. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.