

CBCS SCHEME



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15BT72

Seventh Semester B.E. Degree Examination, Dec.2019/Jan.2020

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. Write about the various methods to discover the function of new genes. (10 Marks)
 b. Give an account on different methods of preparing genomic DNA for sequencing. (06 Marks)

OR

- 2 a. With the principle, explain the fluorescence sequencing method. (08 Marks)
 b. Explain the steps in whole genome shotgun approach. (08 Marks)

Module-2

- 3 a. Explain the inheritance patterns observed in eukaryotes. (08 Marks)
 b. What are ESTs? Explain how they are prepared and add a note on their applications. (08 Marks)

OR

- 4 a. Define genotyping and with an example explain how genotyping is carried out with microarray chips. (08 Marks)
 b. Discuss about functional genomic studies with yeast. (08 Marks)

Module-3

- 5 a. Write a critical note on : i) c-value paradox ii) Gene regulation. (08 Marks)
 b. Give an account on repeat sequence regions in Eukaryotic genome. (08 Marks)

OR

- 6 a. Brief on different post translational modifications in Eukaryotic. (08 Marks)
 b. Give an account on transcriptional factors and their role in gene expression. (08 Marks)

Module-4

- 7 a. Diagrammatically explain the AFLP technique. (08 Marks)
 b. What is gene tagging? Highlight its importance and explain transposon tagging. (08 Marks)

OR

- 8 a. Write a note on physical mapping and explain the FISH technique of mapping. (08 Marks)
 b. Along with a neat sketch, explain the genome mapping approaches for micro organisms. (08 Marks)

Module-5

- 9 a. In a flow chart, explain the large scale preparation of therapeutic proteins. (08 Marks)
 b. Discuss about protein chips and highlight its importance in proteomics field. (08 Marks)

OR

- 10 a. Explain the yeast two hybrid interaction screens and its importance. (08 Marks)
 b. Discuss on the application of proteome analysis in 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.