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(Pages : 2)

Name.....

Reg. No.....

474005

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2024

(CBCSS—UG)

Botany

BOT 6B 11—BIOTECHNOLOGY, MOLECULAR BIOLOGY AND BIOINFORMATICS

(2019 Admission onwards)

Time : Two Hours

Maximum : 60 Marks

Section A

Answer **all** questions.

Each question carries 2 marks.

Ceiling : 20 Marks.

1. Write a note on Polymerase chain reaction.
2. Briefly describe the structural details of Ti Plasmid.
3. Define Mutations. What are its consequences ?
4. Explain Teminism.
5. What is Green computing ? What are its relevance ?
6. Write a note on Genebanks.
7. What are the modern concepts of gene ?
8. What are obtained from PDB ?
9. What is a Primer ?
10. What are the applications of Artificial intelligence in biology ?
11. What is Flavr Savr tomato ?
12. What are the salient features of Type II restriction endonucleases ?

Turn over

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**Section B**

*Answer all questions.*

*Each question carries 5 marks.*

*Ceiling : 30 Marks.*

13. What are the different types of RNAs ? Describe its properties and structure.
14. Explain Molecular Phylogeny.
15. Describe Sanger's method of DNA sequencing
16. Write a brief account of different types of gene transfer methods
17. Describe the regulation of gene action in a Lac operon.
18. Discuss the potential of GM technology in agriculture.
19. Describe the characteristics of Genetic code.

**Section C**

*Answer any one question.*

*The question carries 10 marks.*

20. Explain the central dogma of molecular biology and describe in detail how proteins are in a cell.
21. Write an essay on Biological databases and its significance.

(1 × 10)