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Name.....

Reg. No.....

SIXTH SEMESTER U.G. DEGREE EXAMINATION, MARCH 2022

(CBCSS—UG)

Botany

BOT 6B 11—BIOTECHNOLOGY, MOLECULAR BIOLOGY AND BIOINFORMATICS
(2019 Admissions)

Time : Two Hours

Maximum : 60 Marks

Section A

*Answer at least eight questions.
Each question carries 3 marks.
All questions can be attended.
Overall Ceiling 24.*

1. What is Proteomics ? What are the applications ?
2. Write a note on the technique Biolistics.
3. Define mutations. What are its consequences ?
4. Briefly explain about nucleotide databases. Give example.
5. Operon.
6. What are the genetic features modified in FlavrSavr tomato ?
7. What are Pyrimidines ? Give examples.
8. What is the importance of SwissProt ?
9. Write a brief note on antibiotic resistance markers.
10. Primers.
11. What is the scope of Artificial intelligence in biology ?
12. What are the salient features of Type II restriction endonucleases ?

$(8 \times 3 = 24 \text{ marks})$

Section B

*Answer at least five questions.
Each question carries 5 marks.
All questions can be attended.
Overall Ceiling 25.*

13. Briefly explain the science behind 'Golden Rice' ? Why it is so called ?
14. Briefly explain the production of mature mRNA from DNA.

Turn over

15. Explain how BLAST is used.
16. Describe how Transformed bacteria are selected ?
17. Describe the regulation of genes in a Trp operon.
18. Molecular Phylogeny.
19. Describe mechanism of gene regulation in FlavrSavr Tomato.

(5 × 5 = 25 marks)

Section C

Answer any one question.

The question carries 11 marks.

20. Write an essay on the various application of Biotechnology, with special reference to environmental pollution.
21. Write an essay on Biological databases and its significance.

(1 × 11 = 11 marks)