

D 70210

(Pages : 2)

Name.....

Reg. No.....

FIFTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, NOVEMBER 2019

(CUCBCSS-UG)

Botany

**BOT 5B 08—GENERAL AND BIOINFORMATICS, INTRODUCTORY BIOTECHNOLOGY
AND MOLECULAR BIOLOGY**

Time : Three Hours

Maximum : 80 Marks

Section A

Answer all questions.

Each question carries 1 mark.

1. Name a social network site.
2. A website providing academic service.
3. A protein sequence database.
4. A set of three nucleotides designating an amino acid.
5. Name a tissue culture medium.
6. The source of Ti plasmid.
7. Expand PCR.
8. A GM crop.
9. Which bacteria is called the superbug ?
10. Result of the fusion of the cytoplasm of two cells.

(10 × 1 = 10 marks)

Section B

Answer all questions.

Each question carries 2 marks.

11. Define search engines with an example.
12. What is NICNET ? What is its significance ?
13. What do you mean by green computing ?
14. List the salient features of Species 2000.
15. Why are dideoxynucleotides significant in DNA sequencing ?
16. DNA replication is said to be semiconservative. Why ?
17. Differentiate between cistrons and reconns.
18. What is central dogma ?

Turn over

19. Give two characteristic features of a laminar air flow chamber.
20. Define somatic embryogenesis.

(10 × 2 = 20 marks)

Section C

*Answer any five questions.
Each question carries 6 marks.*

21. Write a note on genetically modified crops with examples.
22. Explain the process of southern blotting and its importance.
23. Give an account on the various types of mutations.
24. Describe the structure of a DNA molecule with diagram.
25. Explain the characteristics of the genetic code.
26. Write briefly on the applications of IT in education.
27. Analyze the benefits and hazards of using social network sites.
28. How can you retrieve information from biological databases by sequence alignment ?

(5 × 6 = 30 marks)

Section D

*Answer any two questions.
Each question carries 10 marks.*

29. Explain, in detail, the steps involved in recombinant DNA technology and selection of recombinants.
30. Discuss the processes involved in micropropagation and add a note on its advantages.
31. Explain the operon concept in prokaryotes and describe gene regulation in Lac operon.

(2 × 10 = 20 marks)