

C 1116

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, MARCH 2021

Chemistry

CHE 6B 12—ADVANCED AND APPLIED CHEMISTRY

Time : Three Hours

Maximum : 80 Marks

Section A (One Word)

Answer all questions.

Each question carries 1 mark.

1. _____ is an example for a carbon nanostructure.
2. _____ is a green solvent.
3. Monomer of nylon 6 is _____.
4. An example for a thermoplastic polymer is _____.
5. Major product of Travancore Titanium Products is _____.
6. _____ is an indicator of the ignition properties of diesel fuel.
7. An example for a prodrug is _____.
8. _____ is an example for an anesthetic.
9. Give an example for a herbicide.
10. Write an example for a chromophore.

(10 × 1 = 10 marks)

Section B (Short Answer)

Answer at least five questions.

Each question carries 4 marks.

All questions can be attended.

Overall Ceiling 20.

11. Explain the term host-guest chemistry.
12. What are carbon nanotubes ?
13. What is supramolecular chemistry ?
14. Write the structure of ajinomoto.
15. What is a computer programme ? Give an example.
16. Define Tacticity.

Turn over

17. Explain addition polymerization using a suitable example.
18. What is PGA ?
19. Give the composition of tooth paste.
20. Define Knocking.
21. What are antipyretics ? Give an example.
22. Based on the concept of chromophore-auxochrome theory, arrange the following compounds in the increasing order of colour intensity.
nitro benzene, picric acid, benzene, 4-nitro phenol.

(5 × 4 = 20 marks)

Section C (Paragraph)

Answer at least four questions.

Each question carries 7 marks.

All questions can be attended.

Overall Ceiling 28.

23. Explain the cleansing action of soap.
24. Write a note on green organic synthesis using aldol condensation as an example.
25. Explain the classification of dyes based on their application.
26. Discuss the application of combinatorial synthesis in drug discovery.
27. What is Buna rubber ? Explain its synthesis and properties.
28. Explain the synthesis and applications of kevlar.
29. What are biodegradable polymers ? Give examples.
30. Explain the preparation and use of paracetamol and aspirin.

(4 × 7 = 28 marks)

Section D (Essay)

Answer any two questions.

Each question carries 11 marks.

31. What is green chemistry ? Discuss the principles of it.
32. Explain the synthesis and applications of the following polymers.
(a) PAN ; (b) Nylon 6 ; (c) Terylene ; and (d) PMMA.
33. (a) Discuss the classification of glass.
(b) Write a note on different carbon nanostructures.
34. Discuss different types of non-covalent in supramolecular chemistry using suitable examples.

(2 × 11 = 22 marks)