SIXTH SEMESTER B.A./B.Sc. DEGREE EXAMINATION, MARCH 2020

(CUCBCSS—UG)

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. Give an example of anesthetic.

2. What is bakelite ?

3. Give the structure of Endosulphan.

4. What is cetane number ?

5. Name the different types of RNA.

6. Name the major component of talcum powder.

7. What is antiperspirant ?

8. Name any one Bioerodible polymer for delivery of macromolecules.

9. Name any one Inorganic Fertilizer.

10. What is curve fitting ?

(10 × 1 = 10 marks)

Section B (Short Answers)

Answer any ten questions.
Each question carries 2 marks.

11. What are UV absorbers ?

12. Discuss the preparation of Indigo.

13. What are rodenticides ? Give two examples.

14. What is terylene ? What is its use ?

15. Discuss briefly semi-empirical method.

16. List the applications of nano materials in optics.

17. Discuss the structural features of DNA.

18. Discuss briefly the harmful effects of pesticides.

Turn over

19. Draw structures of BHT and BHA.

20. What is an operating system ? Give examples.

21. What is simple linear regression ?

22. What is object oriented programming ?

(10 × 2 = 20 marks)

Section C (Paragraphs)

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

23. Discuss briefly the uses of LPG and CNG.

24. What are anti psychedelic drugs ? Give examples.

25. Write short note on refractory materials.

26. Discuss briefly combinatorial synthesis.

27. Write short note on chemical constitution of dye.

28. What are the advantages of Ziegler Natta polymerisation ?

29. What are herbicides ? Give three examples and uses.

30. Name two synthetic detergents ? How do they differ from soap ? What is the chemistry of cleansing action of soap ?

(5 × 6 = 30 marks)

Section D (Essays)

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

31. (a) Discuss briefly semi conductor and metal oxide nano-particles.

    (b) Write short note on classification of dye based on structure.

32. (a) Write short note on manufacture and composition of cement.

    (b) Explain the twelve principles of green chemistry.

33. (a) Discuss the composition and advantages of milk.

    (b) Give the preparation of aspirin and paracetamol.

34. (a) Discuss the applications of Buna S, Buna N and Neoprene.

    (b) Write short note on knocking. What are anti-knocking compounds ?

(2 × 10 = 20 marks)