C 60066 (Pages : 2) Name...

Reg. No......................................

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2019

(CUCBCSS)

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 an Antacid.

2. Give the structure of BHC.

3. Monomer unit of Teflon is —————.

4. An example of Rocket propellant is —————.

5. What is Tacticity ?

6. An example of Antiknock Compound is —————.

7. What are Refractory Materials ?

8. What are Quantum Dots ?

9. What is Curve fitting ?

10. Name the major component of Tooth Paste.

$(10 \times 1 = 10 \text{ marks})$

Section B (Short Answers)

*Answer any **ten** questions.*
Each question carries 2 marks.

11. List any *two* uses of Indigo.

12. How is Glass manufactured ?

13. What are Analgesics ? Give an example.

14. What is Zeigler-Natta Catalyst ? Name a polymerization where it is used as a Catalyst.

15. What are Insecticides ? Give *three* examples.

16. Write S.N. on Nitrogenous Fertilisers.

17. Write S.N. on Biodegradable Polymers.

Turn over

18. Discuss briefly secondary structure of Proteins.

19. What is Structured Programming ?

20. Discuss briefly Ab-initio method.

21. What is simple Linear regression ?

22. List the applications of Nano materials in electronics.

$(10 \times 2 = 20$ marks$)$

Section C (Paragraphs)

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

23. Write S.N. on theories of chemical constitution of Dyes.

24. How is Rosaniline and Indigo prepared ?

25. Write S.N. on addition Polymers. Name any *two* addition Polymers.

26. Discuss briefly Fullerenes with examples.

27. Write S.N. on classification of Nano materials.

28. Discuss briefly types of Glasses.

29. What are the uses of LPG and CNG ?

30. Write S.N. on Combinatorial Synthesis.

31. How is Aspirin and Paracetamol synthesised ?

$(5 \times 6 = 30$ marks$)$

Section D (Essays)

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

32. (a) Explain the twelve principles of Green Chemistry.

    (b) Discuss briefly the Carbon range and used of various fractions of Petroleum distillation.

33. (a) What are the harmful effects of Pesticides ? Briefly describe Endosulfan disaster in Kerala.

    (b) Write S.N. on Programming Languages.

34. (a) Discuss briefly the Common food Adulterants. How are they identified ?

    (b) Write S.N. on detergents—Explain the advantages and disadvantages.

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

    (b) Discuss briefly Metal Nano particles and Semi-conductor Nano particles.

$(2 \times 10 = 20$ marks$)$