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Reg. No. : .....

Name : .....

Fifth Semester B.Sc. Degree Examination, December 2021

First Degree Programme Under CBCSS

Chemistry

Open Course

CH 1551.1 — ESSENTIALS OF CHEMISTRY

(2018 and 2019 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** questions. **Each** question carries **1** mark.

1. What are orbitals?
2. Explain modern periodic law.
3. Define half life period.
4. What is the unit of radioactivity?
5. What is the monomer of natural rubber?
6. Give the structure of polystyrene.
7. What is the chemical name of vitamin-C?
8. Give one example for steroidal hormones.

P.T.O.

9. What are herbicides? Give one example.

10. What is TNT? Where it is used for?

(10 × 1 = 10 Marks)

SECTION – B

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

11. Define Aufbo principle?

12. What are isotopes? Give one example.

13. Explain half filled stability with an example.

14. What are the medical applications of radiation?

15. What are the major types of nuclear radiations?

16. What are fibres? Give one example.

17. Explain the process vulcanization.

18. Give two examples each for water and fat soluble vitamins.

19. What are hormones?

20. What are tranquilizers?

21. What is RDX? Mention its application.

22. Explain greenhouse effect.

23. What is acid rain?

24. What are the major air pollutants?

25. Differentiate hard and soft water?

26. What are inorganic polymers? Give two examples.

(8 × 2 = 16 Marks)

SECTION – C

Answer any **six** questions. **Each** question carries **4** marks.

27. What are quantum numbers? Explain its significances.

28. Explain the Bohr atomic model.

29. Write a note on group displacement law and radioactive decay series.

30. What are nuclear fission reactions? Give one example.

31. Give the synthesis of nylon-6,6. Mention its uses.

32. Differentiate thermoplastics and thermosetting plastics.

33. What are nucleic acids? Discuss their role in life process.

34. Write short note on vitamin deficiency diseases.

35. What are analgesics and disinfectants?

36. What are dyes? Discuss its classification based on applications.

37. Discuss the causes and consequences of ozone layer depletion.

38. What are the disadvantages of hard water?

(6 × 4 = 24 Marks)

SECTION – D

Answer any **two** questions. **Each** question carries **15** marks.

39. (a) What are soaps and detergents? Discuss its types with examples. 8

    (b) Cleansing action of soaps. 7

40. What are enzymes? Discuss its classification and general characteristics.

41. Discuss briefly the various causes and control measures for water pollution.

42. Write an essay on modern periodic table and variation of periodic properties.

43. Write short notes on

    (a) Natural and artificial radioactivity

    (b) Radio carbon dating

44. (a) Discuss the classification of polymers based on origin and structure. **10**

    (b) Give the synthesis and applications of bakelite. **5**

(2 × 15 = 30 Marks)
