

Reg. No. : .....

Name : .....

**Fifth Semester B.Sc. Degree Examination, December 2022**

**First Degree Programme under CBCSS**

**Chemistry**

**Open Course**

**CH 1551.1 : CHEMISTRY AND ITS APPLICATIONS**

**(2020 Admission)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

Answer **all** questions, each question carries **1** mark.

1. Paradigm shift in science is called \_\_\_\_\_.
2. In medieval times, the mythical rock the alchemist searched for which can prolong the owner's life span was called \_\_\_\_\_.
3. In an electrochemical cell, oxidation take place at which electrode?
4. The main components of LPG are \_\_\_\_\_ and \_\_\_\_\_.
5. Give the chemical name of vitamin C.
6. Insulin is produced at \_\_\_\_\_ in the body.
7. Ozone layer depletion is caused due to \_\_\_\_\_.

**P.T.O.**

8. Itai-itai disease is caused by \_\_\_\_\_ metal poisoning from industrial waste water.
9. Give an example of an artificial sweetener used in food.
10. Write an example for a tranquiliser.

(10 × 1 = 10 Marks)

#### SECTION – B

Answer **any eight** questions, each question carries **2** marks.

11. Explain Daltons Atomic theory.
12. What is flash point?
13. Define Calorific value.
14. Explain briefly the classification of vitamins.
15. What are Hormones?
16. List the causes of soil pollution.
17. What are cosmetics?
18. What are thermoplastics? Give an example.
19. Distinguish between antiseptic and disinfectant.
20. Give two examples of greenhouse gases.
21. Explain the cleansing action of Soaps?
22. Give the active ingredient in
- (a) Sunscreen lotion and
- (b) Moisturizer.

23. Explain the Rutherford's atom model.
24. What is the principle of solar cell?
25. What is talcum powder chemically?
26. Give two examples of antiseptic agents.

**(8 × 2 = 16 Marks)**

### SECTION – C

Answer **any six** questions, each question carries **4** marks.

27. Explain briefly the role of models in science.
28. Comment on the environment pollution due to fossil fuel burning, what are the alternatives.
29. What are fuels? How are they classified?
30. Discuss briefly on thyroid hormones, their physiological functions and disease caused due to Iodine deficiency.
31. Explain reverse Osmosis. What is its application?
32. Distinguish between BOD and COD.
33. Distinguish between Detergents and shampoos.
34. What are bio degradable plastics? Discuss briefly the need for recycling plastics.
35. Comment on the harmful effects of fast food and junk food intake.
36. Differentiate thermoplastics and thermosetting plastics.
37. What are analgesic drugs? Give one examples.
38. Write a note on soil pollution.

**(6 × 4 = 24 Marks)**

## SECTION – D

Answer **any two** questions, each question carries **15** marks.

39. (a) Explain briefly on the main branches of chemistry.  
(b) Discuss briefly the major contributions of Michael Faraday.
40. Discuss the principle, classification, applications and advantages of Dry Cell.
41. (a) Explain briefly Why enzymes are called biological catalysts.  
(b) Discuss briefly Insulin and its functions.
42. Discuss the major causes of air pollution? Explain briefly the pollutants in air and their sources.
43. Write an essay on vitamin deficiency diseases.
44. (a) What are nucleic acids? Discuss their types and functions in biological systems. **8**  
(b) What are soaps? Discuss its types and cleansing action of soaps. **7**

**(2 × 15 = 30 Marks)**