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K – 2360

Reg. No. :

Name :

Third Semester B.Sc. Degree Examination, March 2021

First Degree Programme under CBCSS

Chemistry

Complementary Course for Home Science

CH 1331.5 : PHYSICAL AND ORGANIC CHEMISTRY

(2013, 2015 & 2016 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

(Answer **all** questions. Answer in **one** word to maximum **two** sentences.)

1. Explain the term desorption.
2. What are protective colloids?
3. Draw the structure of Coniine.
4. Define Gold number.
5. What is Teflon?
6. Which type of dye is Alizarin?
7. Define sols.
8. What are Terpenoids?
9. Draw the structure of Methyl orange.
10. What is Hardy-Schultz rule?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

(Short answer type. Answer **any eight** questions from the following.

Each question carries **2** marks)

11. State Isoprene rule.
12. Draw the structure of Citral.
13. What are the general properties of Terpenes?
14. What is polymerisation? Illustrate with two suitable examples.
15. Give one method of preparation of Phenolphthalein.
16. How will you synthesis polystyrene from benzene?
17. What is chromophore? Write two examples.
18. Write down the characteristics of synthetic rubber.
19. Distinguish between dispersed phase and dispersion medium.
20. What are addition polymers? Give the examples
21. Differentiate between adsorbent and adsorbate.
22. What is the effect of temperature on adsorption?

(8 × 2 = 16 Marks)

SECTION – C

(Short Essay type. Answer **any six** questions from the following.

Each question carries **4** marks)

23. How will you synthesis Nylon-6,6? Explain its application.
24. Write a note on surfactants.

25. Give the structure of Morphine and explain its physiological activity.
26. What are the applications of adsorption?
27. Differentiate between Lyophilic sols and Lyophobic sols.
28. Explain the principle and application of gas chromatography.
29. Explain electrophoresis.
30. Explain
 - (a) Tyndall effect
 - (b) Brownian motion.
31. Explain the process of Vulcanization of rubber.

(6 × 4 = 24 Marks)

SECTION – D

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

32. (a) Discuss the classification of Colloids.
(b) Write short note on purification methods of colloids.
33. Discuss the principle and application of Column and thin layer Chromatography.
34. Explain the preparation and uses of Nylon 6, Terylene, PVC, PMMA and PVF.
35. (a) Write a short note on modern theory of colours. **10**
(b) Explain and illustrate Hoffmann's exhaustive methylation. **5**

(2 × 15 = 30 Marks)