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SVIS-N-107-B-21
B.Sc. VI Semester (CBCS) Degree Examination
CHEMISTRY
Industrial Chemicals And Environment
Paper : DSE-CHEM-2
(New)

Time : 3 Hours

Maximum Marks : 80

Instructions to Candidates: Answer ALL the three Sections.

SECTION - A

I Answer **ALL** the following questions.

(15×1=15)

1. What is Portland cement?
2. Define the term glass.
3. What are ceramics?
4. What are emulsion paints?
5. Write the constituents of paints.
6. What is dye?
7. Define the term syndets.
8. What is isoprene rule?
9. Write the structure of Atropine.
10. Define iodine value.
11. What is electromagnetic radiation?
12. Define the term degree of freedom.
13. What is secondary cell?
14. What are isotopes?
15. What is selection rule?

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(1)

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SECTION - B

(5×5=25)

II. Answer any FIVE of the following.

16. Explain the mechanism of setting of cement.
17. Describe the manufacture of glass by tank furnace method.
18. Define Saponification value Explain its determination.
19. Explain the synthesis and biological importance of Vit-C.
20. Elucidate the structure of citral.
21. Explain the pure vibrational Raman Spectrum of diatomic molecule.
22. Discuss IR spectrum its energy levels and selection rule of simple harmonic oscillator.

SECTION - C

III. Answer any FIVE of the following.

(5×8=40)

23. a) Explain the types of cement and their uses. (4)
b) Write a note on failure of paints films (4)
24. a) Describe the manufacture of white lead using dutch process. (4)
b) Explain the types of varnishes with examples. (4)
25. a) Write the synthesis of Alizarin. (4)
b) Explain any two methods of protection and deprotection of amino group. (4)
26. a) Explain the synthesis of nicotine. <https://www.karnatakastudy.com> (4)
b) Write the synthesis and uses of nylon 6,6. (4)
27. a) Write a note on (4)
i) Preparation of sodium lauryl sulphate. (4)
ii) Structural formula and uses of Quinine. (4)
b) Give the synthesis and importance of adrenaline (4)
28. a) Explain the uses of isotopes in Agriculture and Medicine. (4)
b) Write a note on Nickel Cadmium cell. (4)
29. a) Give a brief account of basic features of different spectrometers. (4)
b) Write a note on ceric sulphate dosimeter. (4)