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SVS-N 316 B-17

B.Sc. Vth Semester Degree Examination

CHEMISTRY

Paper - 5.2

(New)

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates:

Answer all the sections A,B and C.

SECTION - A

I. Answer all the following questions. **(15 × 1 = 15)**

1) What are essential elements?

2) Define interhalogen compounds.

3) Give any two uses of IF_5.

4) What are macro elements?

5) Write the structure of IF_7

6) What are active methylene compounds?

7) Write the Haworth's structure of maltose.

8) What are auxochromes?

9) Write the general structure of triglyceride.

10) What is denaturation?

11) What is transport number?

12) What is dipole moment?

13) Define ionic mobility.

14) Define degree of dissociation.

15) Define equivalent conductance of an electrolyte solution.

SECTION - B

II. Answer any **Five** of the following: **(5 × 5 = 25)**

16) Explain the role of alkali metals in biological system.

17) Describe the basic properties of iodine.

18) Write a note on keto-enol tautomerism in ethyl acetoacetate.

19) Explain the Killiani-Fischer synthesis of chain lengthening of aldoses.

20) Describe the cleansing action of soaps.

21) Write a note on Debey-Huckel-Onsagar equation for strong electrolytes.

22) Explain the followings:

i) Orientation polarization.

ii) Induced polarization.

SECTION - C

III. Answer any **Four** of the following: **(4 × 10 = 40)**

23) a) Discuss the role of alkaline earth metals in biological system. **(6)**

b) Explain the biological functions of Haemoglobin. **(4)**

24) a) Describe the preparation and structure of chlorine trifluoride. **(6)**

b) Write a short note on pseudohalogens. **(4)**

25) a) Elucidate the open-chain structure of D-glucose. **(6)**

b) Explain the synthesis of malachite green. **(4)**

26) a) Write the mechanism of ethyl acetoacetate synthesis. **(6)**

b) Discuss the determination of iodine value of oils and fats. **(4)**

27) a) Explain the variation of equivalent conductance and specific conductance with dilution in strong and weak electrolytes. **(6)**

b) Explain the mechanism of conductor in metallic and electrolytic conductor. **(4)**

28) a) State and explain kohlrausch law. Write any one application. **(6)**

b) 0.5N solution of a salt placed between two platinum electrode 2.1 cm apart and area of cross section 2.4 square cm has a resistance of 250 ohms. Calculate the equivalent conductance of the solution. **(4)**

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