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II

Total No. of Questions : 21
Total No. of Printed Pages : 4

Regd. No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

Part - III
CHEMISTRY, Paper - II
(English version)

Time : 3 Hours]　　　　　　　　　　　　　[Max. Marks : 60

Note : Read the following instructions carefully.

(i) Answer **all** the questions of **Section-A**. Answer **ANY SIX** questions of **Section-B** and **ANY TWO** questions of **Section-C**.

(ii) In **Section-A**, questions from Sl. Nos. **1** to **10** are of *Very short answer type*. Each question carries **TWO** marks. Every answer may be limited to 2 or 3 sentences. Answer **all** these questions at one place in the same order.

(iii) In **Section-B**, questions from Sl. Nos. **11** to **18** are of *Short answer type*. Each question carries **FOUR** marks. Every answer may be limited to 75 words.

(iv) In **Section-C**, questions from Sl. Nos. **19** to **21** are of *Long answer type*. Each question carries **EIGHT** marks. Every answer may be limited to 300 words.

(v) Draw labelled diagrams, wherever necessary for questions in **Sections - B** and **C**.

SECTION - A　　　　　　　　　10×2=20

Note : Answer **all** the questions.

1. What are Isotonic solutions ?

2. What is metallic corrosion ? Give one example.

3. Explain Poling.

4. What happens when white phosphorous is heated with conc. NaOH solution in an inert atmosphere of CO_2 ?

5. Using IUPAC norms, write the systematic names of the following.

   (i) $K_4[Fe(CN)_6]$

   (ii) $[Cu(NH_3)_4]SO_4$

6. What are Antiseptics ? Give example.

7. What are artificial sweetening agents ? Give example.

8. What is tailing of Mercury ?

9. Explain the Wurtz - Fitting reaction.

10. Write the structures of the following compounds.

    (i) 2 - chloro, 3 - methyl pentane

    (ii) p - bromo chloro benzene.

SECTION - B   6×4=24

Note : Answer **ANY SIX** questions.

11. Derive Bragg's equation.

12. Define Molality (m). Calculate molality (m) of 10 gm of Glucose ($C_6H_{12}O_6$) in 90 gm of Water.

13. What is Electrolysis ? A solution of $CuSO_4$ is electrolysed for 10 minutes with a current of 1.5 amperes. What is the mass of Copper deposited at the Cathode ?

14. Explain the purification of Sulphide ores by Froth floatation method.

15. Write the characteristic properties of Transition elements.

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M

16. Write the names of the monomers used for getting the following polymers.

   (i) Nylon 6, 6

   (ii) Glyptal

   (iii) Bakelite

   (iv) Terylene

17. Explain the following named reactions.

   (i) Sandmeyer reaction.

   (ii) Gattermann reaction.

18. Give the sources of the following vitamins and name the disease caused by their deficiency.

   (a) A

   (b) E

   (c) K

   (d) D

SECTION - C   2×8=16

*Note : Answer **ANY TWO** questions.*

19. (A) State and explain Kohlrausch's law of independent migration of ions.

   (B) What are different types of adsorption ? Give any three differences between characteristics of these different types.

20. (A) How is Chlorine prepared by electrolytic method ? Explain its reaction with -

   (a) Excess NH_3

   (b) Cold and dil. NaOH

   (c) Slaked lime

   (B) Explain the structures of XeF_2 and XeF_6.

21. (A) Explain the following reactions.

  (i) Reimer - Tiemann reaction

  (ii) Williamson's Ether synthesis.

  (B) Describe the following.

  (i) Cross aldol condensation.

  (ii) Decarboxylation.

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