

Ts12C

Tenkasi District



Common Second Mid Term Test - 2024

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Standard 12 CHEMISTRY

Time: 1.30 Hours

Marks: 35

PART - I

I. Choose the correct answer.

5×1=5

- 1) The possible isomers for the Complex $[\text{Co}(\text{NH}_3)_4\text{Br}_2]\text{Cl}$
 - a) Structural and ionisation isomers
 - b) Structural and optical isomerism
 - c) Optical and ionisation isomerism
 - d) Structural isomer only
- 2) Which one of the following is Paramagnetic
 - a) $[\text{Zn}(\text{NH}_3)_4]^{2+}$
 - b) $[\text{Co}(\text{NH}_3)_6]^{3+}$
 - c) $[\text{Ni}(\text{H}_2\text{O})_6]^{2+}$
 - d) $[\text{Ni}(\text{CN})_4]^{2-}$
- 3) The no of Farady electricity required to complete the reaction in $\text{MnO}_4^- \rightarrow \text{Mn}^{2+}$
 - a) 5 F
 - b) 3 F
 - c) 1 F
 - d) 7 F
- 4) W/O emulsion can be converted into O/W emulsion, the term is called
 - a) coagulation
 - b) emulcification
 - c) dissociation
 - d) inversion of phase
- 5) $\text{CH}_3\text{NC} + 4 [\text{H}] \xrightarrow[\text{Ni}/\text{H}_2]{\text{Na}/\text{C}_2\text{H}_5\text{OH}}$
 - a) Amide
 - b) Primary amine
 - c) Secondary amine
 - d) Tertiary amine

PART - II

II. Answer any three. Q.No. 10 is compulsory

3×2=6

- 6) Give the IUPAC Name
 - a) $[\text{Co}(\text{en})_3]_2 (\text{SO}_4)_3$
 - b) $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2 \text{NO}_2]$
- 7) What are the limitations of V.B. Theory
- 8) Explain Kohlrausch Law
- 9) Differentiate Emulsion and Gel
- 10) How will you prepare chloropicrin?

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PART - III

III. Answer any three. Q.No. 15 is compulsory

3×3=9

- 11) Differentiate Double salt complex salt
- 12) On the basis of VB theory $[\text{Ni}(\text{CN})_4]^{2-}$ is diamagnetic - Explain
- 13) Define electrochemical equivalent
- 14) Write short note on Gabriel Phthalimide synthesis.
- 15) $\text{Zn}_{(s)} + \text{Cu}^{2+}_{(0.1\text{M})} \rightleftharpoons \text{Zn}^{2+}_{(1\text{M})} + \text{Cu}$ In this case reaction $E^\circ_{\text{cell}} = 1.1$, then calculate Ecell Value.

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PART - IV

IV. Answer any three.

3×5=15

- 16) what are the postulates of Werner theory?
 - 17) Derive Nernst Equation.
 - 18) Differentiate physical adsorption and chemical adsorption
 - 19) Write short note on
 - a) Mustard oil reaction
 - b) Carbylamine reaction
 - 20) Explain $H_2 - O_2$ fuel cell
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