

XIIth - REVISION EXAM -2024

Time Allowed:3 Hrs]

[Maximum Marks: 70

CHEMISTRY**PART - I**Answer *All* the questions.

15x1=15

- Which ore is known as copper matte _____
a) $\text{CuO}+\text{SiO}_2$ b) $\text{Cu}_2\text{S}+\text{FeS}$ c) $\text{FeO}+\text{SiO}_2$ d) CuFeS_2
- Which one is a poisonous gas _____
a) CO b) N_2 c) H_2 d) Ne
- The allotropic forms of oxygen is _____
a) O_4 & O_2 b) O_2 & O_3 c) O_3 & O_4 d) None of these
- Number of unpaired electrons in Ni^{2+} is _____
a) 4 b) 2 c) 6 d) 8
- The colour of $\text{CoCl}_3.4\text{NH}_3$ is
a) violet b) green c) purple d) both a & b
- An example for Frenkel defect is
a) NaCl b) AgBr c) CsCl d) FeS
- If the initial concentration of the reactant is doubled, the time for half reaction is also doubled. Then the order of the reaction is
a) Zero b) one c) Fraction d) none
- The p^{OH} of 1N HCl is a) 0 b) 1 c) 7 d) 14
- The emf of SHE is
a) +1 V b) -1V c) 0 V d) +2V
- Hair cream is
a) gel b) emulsion c) solid sol d) sol
- $\text{HO}-\text{CH}_2-\text{CH}_2-\text{OH}$ on heating with periodic acid gives
a) methanoic acid b) Glyoxal c) methanal d) CO_2
- Which one of the following reduces Tollens reagent
a) formic acid b) acetic acid c) benzophenone d) none of these
- Pyridoxine is vitamin
a) B_1 b) B_2 c) B_6 d) B_{12}
- Carbohydrate are also called as
a) lipids b) fats c) saccharides d) none
- Which of the following is a co-polymer?
a) Orlon b) PAN c) Teflon d) PHBV

PART - IIAnswer any *six* of the following questions. Question No.24 is Compulsory.

6x2=12

16. What are the difference between minerals and ores?
17. What is Inert pair effect?
18. Give the difference between double salts and coordination compounds.
19. Calculate the number of atoms in a BCC unit cell.
20. State : Ostwald's dilution law.
21. What are antibiotics?
22. Write a note on schotten – Baumann reaction.
23. Give the preparation of Urotropine?
24. Calculate the pH of 0.001M HCl solution.

PART - III

Answer any *six* of the following questions. Question No.33 is Compulsory. 6x3=18

25. What are the factors that are responsible for the anomalous behaviour of p – block first elements?
26. What is lanthanide contraction?
27. Explain Mond's process.
28. Define average rate and instantaneous rate.
29. Define : Equivalent conductance.
30. Distinguish : rate of a reaction and rate constant of a reaction?
31. Write wolf krishner reduction?
32. Write a note on saponification.
33. Distinguish : Adsorption and Absorption.

PART - IV

Answer *All* the questions. 5x5=25

34. a) Explain zone refining process. (or)
b) Differentiate the lanthanides and actinides.
35. a) Write the postulates of Werner's theory. (or)
b) i) Write note on the structure of diborane.
ii) What are the uses of borax?
36. a) i) Explain Frenkel defect. ?
ii) Explain Schottky defect. (or)
b) Derive the integrated rate law for a first order reaction.
37. a) Derive Henderson – Hasselbalch equation. (or) Derive an expression for the pH of a buffer solution. (or)
b) Explain the mechanism of Cannizaro reaction.
38. a) i) How is phenolphthalein prepared?
ii) What is Riemeier – Tiemann reaction? (or)
b) How is the structure of glucose elucidated?

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