

Class : 12Register
Number**FIRST REVISION EXAMINATION, JANUARY - 2025**

Time Allowed : 3.00 Hours]

CHEMISTRY

[Max. Marks : 70

PART - I**NOTE:** Answer all the questions.

15x1=15

- Wolframite ore is separated from tinstone by the process of
 - Smelting
 - Calcination
 - Roasting
 - Electromagnetic separation
- The element that does not show catenation among the following p-block elements is
 - Carbon
 - silicon
 - Lead
 - germanium
- Which of the following is weakest acid among all?
 - HI
 - HF
 - HBr
 - HCl
- Permanganate ion changes to in acidic medium
 - MnO_4^{2-}
 - Mn^{2+}
 - Mn^{3+}
 - MnO_2
- A magnetic moment of 3.87 BM will be shown by one among the following
 - $[TiCl_4]$
 - $[CoCl_6]^{4-}$
 - $[Cu(NH_3)_4]^{2+}$
 - $[Ni(CN)_4]^{2-}$
- Assertion:** due to Frenkel defect, density of the crystalline solid decreases.
Reason: in Frenkel defect cation and anion leaves the crystal.
 - Both assertion and reason are true and reason is the correct explanation of assertion.
 - Both assertion and reason are true but reason is not the correct explanation of assertion.
 - Assertion is true but reason is false
 - Both assertion and reason are false
- The addition of a catalyst during a chemical reaction alters which of the following quantities?
 - Enthalpy
 - Activation energy
 - Entropy
 - Internal energy
- $H_2PO_4^-$ the conjugate acid of
 - PO_4^{3-}
 - P_2O_5
 - H_3PO_4
 - HPO_4^{2-}
- Zinc can be coated on iron to produce galvanized iron but the reverse is not possible. It is because
 - Zinc is lighter than iron
 - Zinc has lower melting point than iron
 - Zinc has lower negative electrode potential than iron
 - Zinc has higher negative electrode potential than iron
- colloidal gold is
 - gel
 - emulsion
 - solid sol
 - sol
- Picric acid is
 - Phenol
 - 2,4,6 tri nitro phenol
 - benzoic acid
 - phenylacetic acid
- Which one of the following reduces tollens reagent
 - methanoic acid
 - methanal
 - ethanal
 - all the above
- $C_6H_5NO_2 \xrightarrow{Fe/HCl} A \xrightarrow[273K]{NaNO_2/HCl} B$
 - C_6H_5-OH
 - $C_6H_5-CH_2OH$
 - C_6H_5-CHO
 - $C_6H_5N_2Cl$
- The number of sp^2 and sp^3 hybridised carbon in fructose are respectively
 - 1 and 4
 - 4 and 2
 - 5 and 1
 - 1 and 5
- Non stick cook wares generally have a coating of a polymer, whose monomer is
 - ethane
 - prop-2-enitrile
 - chloroethene
 - 1,1,2,2-tetrafluoroethane

PART - II**Note:** Answer any Six questions. Question No.24 is compulsory.

6X2=12

- Give the uses of Boric acid.
- Why fluorine is more reactive than other halogens?

KK/J/12/Che/1

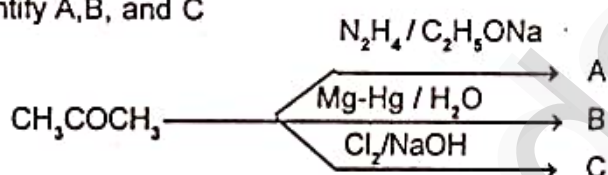
18. What are interstitial compounds?
19. Why ionic crystals are hard and brittle?
20. Define solubility product.
21. Write a note on acylation of anisole.
22. Aniline does not undergo Friedel – Crafts reaction why?
23. Classify the following into monosaccharides, oligosaccharides and polysaccharides.
 - i) Starch ii) fructose iii) cellulose iv) lactose v) Galactose
24. Calculate the standard emf of the cell: $\text{Cd}/\text{Cd}^{2+} // \text{Cu}^{2+}/\text{Cu}$ and determine the cell reaction. The standard reduction potentials of Cu^{2+}/Cu and Cd/Cd^{2+} are 0.34V and - 0.40 volts respectively. Predict the feasibility of the cell reaction.

PART - III

Note: Answer any Six questions. Questions No.33 is compulsory.

6x3=18

25. Explain the following terms with suitable examples.
 - i) Gangue ii) Slag
26. a) $\text{Mg} + \text{dil HNO}_3 \rightarrow ?$
 b) $\text{Cu} + \text{conc. H}_2\text{SO}_4 \rightarrow ?$
 c) $\text{MnO}_2 + \text{Conc. HCl} \rightarrow ?$
27. Transition metals show high melting points why?
28. Explain pseudo first order reaction with an example.
29. State Faraday's laws of electrolysis.
30. Write a note on electro osmosis.
31. How is carboic acid prepared from chloro benzene.
32. Give short notes on Gabriel phthalimide synthesis?
33. Identify A, B, and C



PART - IV

Note: Answer All the questions.

5X5=25

34. a) i) Explain froth floatation method.
 ii) What is silicate? (OR)
- b) i) What is known as Holme's signal?
 ii) Which strong reducing agent Cr^{2+} or Fe^{2+}
35. a) A Solution of $[\text{Ni}(\text{H}_2\text{O})_6]^{2+}$ is green, whereas a solution of $[\text{Ni}(\text{CN})_4]^{2-}$ is colorless explain.
 (OR)
- b) Differentiate crystalline solids and amorphous solids.
36. a) i) Calculate the P^{H} of 0.04 M HNO_3
 ii) Give the characteristics of catalysis. (OR)
- b) Describe the construction of Daniel cell. Write the cell reaction.
37. a) i) How will you convert ethane-1,2 -diol to methanal.
 ii) write short notes on saponification reaction. (OR)
- b) How will you prepare
 - i. Acetic anhydride from acetic acid ii. Cinnamic acid from benzaldehyde
 - iii. Acetaldehyde from ethyne
38. a) What are the functions of lipids in living organism? (OR)
- b) i) How is nylon 6,6 prepared? Mention its uses.
 ii) How is neoprene prepared? Mention its uses.

KK/M. 12 / Che / 2