

T COMMON FIRST REVISION TEST - 2025

Standard - XII

 Reg.No.

| | | | | | |
|---|---|---|---|--|--|
| 2 | 4 | 1 | 9 | | |
|---|---|---|---|--|--|

Time: 3.00 hrs.

CHEMISTRY

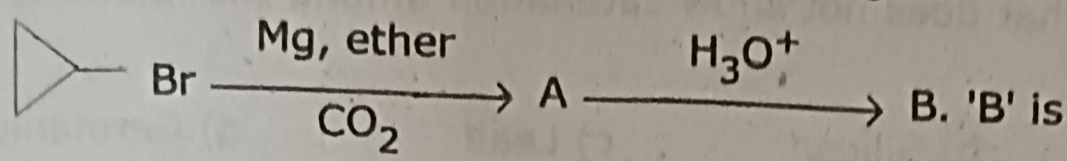
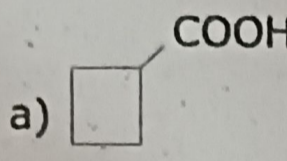
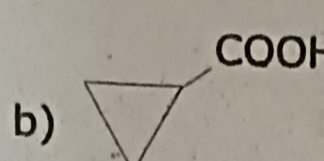
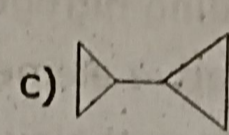
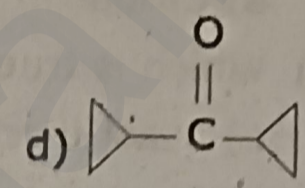
Marks: 70

PART - I

Answer all the questions:

15×1=15

- 1) Roasting of sulphide ore gives the gas (A). (A) is a colourless gas. Aqueous solution of (A) is acidic. The gas (A) is
 - a) CO₂
 - b) SO₃
 - c) SO₂
 - d) H₂S
- 2) The element that does not show catenation among the following p-block element is
 - a) Carbon
 - b) Silicon
 - c) Lead
 - d) Germanium
- 3) Which is true regarding nitrogen?
 - a) Least electronegative element
 - b) has low ionisation enthalpy than oxygen
 - c) d-orbitals available
 - d) ability to form pπ – pπ bonds with itself
- 4) Which of the following is oxide ore?
 - i) Bauxite
 - ii) Haematite
 - iii) Cuprite
 - iv) Zincite
 - a) i and ii
 - b) i and iii
 - c) i, ii, iii
 - d) all the above
- 5) The numbers of six membered rings and five membered rings in a Buckminster fullerene fused ring system are respectively
 - a) 12 and 20
 - b) 20 and 12
 - c) 10 and 22
 - d) 22 and 10
- 6) In acid medium, potassium permanganate oxidizes oxalic acid to
 - a) oxalate
 - b) carbon dioxide
 - c) acetate
 - d) acetic acid
- 7) The yellow colour in NaCl crystal is due to
 - a) excitation of electrons in F centers
 - b) reflection of light from Cl⁻ ion on the surface
 - c) reflection of light from Na⁺ ion
 - d) all of the above
- 8) The formula of magnetic moment is
 - a) $\mu = g\sqrt{s(s+1)}$
 - b) $\mu = n\sqrt{n+2}$
 - c) $\mu = \sqrt{n(n+2)}$
 - d) a and c

- 9) For the reaction, $2\text{NH}_3 \rightarrow \text{N}_2 + 3\text{H}_2$, if $\frac{-d[\text{NH}_3]}{dt} = K_1[\text{NH}_3]$, $\frac{-d[\text{N}_2]}{dt} = K_2[\text{NH}_3]$, $\frac{d[\text{H}_2]}{dt} = K_3[\text{NH}_3]$ then the relation between K_1 , K_2 and K_3 is
- a) $K_1 = K_2 = K_3$ b) $K_1 = 3K_2 = 2K_3$
 c) $1.5K_1 = 3K_2 = K_3$ d) $2K_1 = K_2 = 3K_3$
- 10) Total volume occupied by the spheres in SC unit cell is
- a) $\frac{100\pi a^3}{6}$ b) $\frac{\sqrt{3}\pi a^3}{8}$ c) $\frac{\sqrt{2}\pi a^3}{6}$ d) $\frac{\pi a^3}{6}$
- 11) 
- a)  b)  c)  d) 
- 12) Ethylene glycol on treatment with HIO_4 gives
- a) Methanoic acid b) Glyoxal c) Methanal d) CO_2
- 13) Dissociation constant of NH_4OH is 1.8×10^{-5} the hydrolysis constant of NH_4Cl would be
- a) 1.8×10^{-19} b) 5.55×10^{-10} c) 5.55×10^{-5} d) 1.80×10^{-5}
- 14) Which of the following is not Lewis base?
- a) CN^- b) SO_2 c) SO_4^{2-} d) CH_3^-
- 15) Oxidation of glycerol with _____ gives glycerose.
- a) $\text{Br}_2 / \text{H}_2\text{O}$ b) NaOBr c) $\text{Fe}^{2+} / \text{H}_2\text{O}_2$ d) All the above

PART - II**Answer any six questions. Q.No. 24 is compulsory:****6 × 2 = 12**

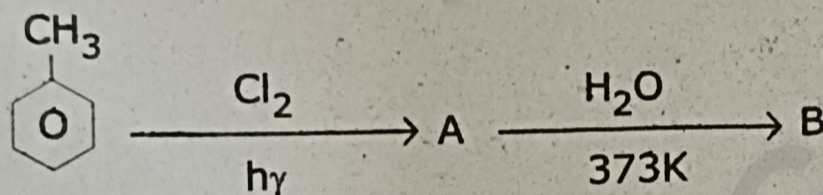
- 16) What is acid leaching?
- 17) Write any two properties of Silicone.
- 18) What happens when PCl_5 is heated?
- 19) Calculate the number of unpaired electrons in Ti^{3+} , Mn^{2+} and calculate the spin only magnetic moment.
- 20) What is meant by crystal lattice?
- 21) Give the difference between order and molecularity of a reaction.
- 22) What are buffer solution? Write their types.
- 23) How do you prepare aniline from phenol?
- 24) Write any two test for aldehyde.

PART - III

6×3=18

Answer any six questions. Q.No. 33 is compulsory:

- 25) Write the observations from the Ellingham diagram.
- 26) Draw the structure of Boric acid.
- 27) What happens when ammonia reacts with excess of chlorine?
- 28) Discuss the oxidising power of KMnO_4 in acidic medium.
- 29) Write a short note on metal excess defect.
- 30) Give three examples for first order reaction.
- 31) Write the limitations of Arrhenius concept and Lowry - Bronsted theory.
- 32) Explain the Victor Meyer's test for primary alcohol.
- 33) Find the compounds A and B.



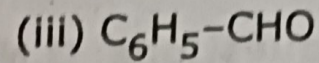
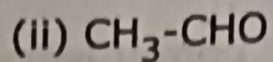
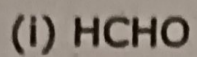
PART - IV

Answer all the questions:

5×5=25

- 34) a) i) Explain Alumino thermic process. (3)
 ii) Give the uses of Zinc. (2)
 (OR)
- b) Name the types of silicate and give an example of each. (5)
- 35) a) Give the difference between Crystalline solids and Amorphous solids. (5)
 (OR)
- b) i) What are the factors affecting the reaction rate? (2)
 ii) Explain the effect of catalyst on reaction rate. (3)
- 36) a) Derive an expression for Ostwald's dilution law. (5)
 (OR)
- b) i) HF acid is not stored in glass bottles why? (2)
 ii) Write about Holmes signal. (3)
- 37) a) i) Explain why Cr^{2+} is strongly reducing while Mn^{3+} is strongly oxidizing. (3)
 ii) Out of $\text{Lu}(\text{OH})_3$ and $\text{La}(\text{OH})_3$ which is more basic and why? (2)
 (OR)
- b) Explain Saytzeff's rule with example. (5)

38) a) Write the reaction of following compounds with ammonia. (5)



(OR)

b) C₂H₄O organic compound 'A' reduces Tollens reagent. Compound 'A' reacts with Sodium hydroxide gives 'B'. Compound 'B' on heating with acid gives compound 'C'. Compound 'A' reduced with Zn-Hg and Con.HCl give compound 'D' C₂H₆. Find the compound A, B, C and D. (5)
