



COMMON FIRST REVISION TEST – 2023

Standard XII

Reg.No. : 012309

CHEMISTRY

Time: 3.00 hrs.

Part - I

Marks: 70
15 x 1 = 15

I. Choose the correct answer:

- Wolframite ore is separated from tinstone by the process of
 - smelting
 - calcination
 - roasting
 - electromagnetic separation
- Carbon atoms in fullerene with formula C_{60} have
 - sp^3 hybridised
 - sp hybridised
 - sp^2 hybridised
 - partially sp^2 and partially sp^3 hybridised
- Which of the following is strongest acid among all?
 - HI
 - HF
 - HBr
 - HCl
- The transition element which has only +3 oxidation state is
 - Ni
 - Mn
 - Cr
 - Sc
- IUPAC name of the complex $K_3[Al(C_2O_4)_3]$ is
 - potassium tri oxalato aluminium (III)
 - potassium tri oxalato aluminate (II)
 - potassium tris oxalato aluminate (III)
 - potassium tri oxalato aluminate (III)
- CsCl has bcc arrangement, its unit cell edge length is 400 pm, its inter atomic distance is
 - 400 pm
 - 800 pm
 - $\sqrt{3} \times 100$ pm
 - $\left(\frac{\sqrt{3}}{2}\right) \times 400$ pm
- The rate constant of a reaction is $5.8 \times 10^{-2} s^{-1}$. The order of the reaction is
 - first order
 - zero order
 - second order
 - third order
- The pH of an aqueous solution is zero. The solution is
 - slightly acidic
 - strongly acidic
 - neutral
 - basic
- Laptops have
 - Lead Storage battery
 - Fuel cell
 - Mercury Button cell
 - Lithium ion battery
- Fog is colloidal solution of
 - solid in gas
 - gas in gas
 - liquid in gas
 - gas in liquid
- On reacting with neutral ferric chloride, phenol gives
 - red colour
 - violet colour
 - dark green colour
 - no colouration
- Assertion : 2,2-dimethyl propanoic acid does not give HVZ reaction.
Reason : 2,2-dimethyl propanoic acid does not have α -hydrogen atom
 - if both assertion and reason are true and reason is the correct explanation of assertion
 - if 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 product formed by the reaction an aldehyde with a primary amine
 - carboxylic acid
 - aromatic acid
 - Schiff's base
 - ketone
- Which of the following amino acids are achiral?
 - alanine
 - leucine
 - proline
 - glycine
- The medicinal value of a drug is measured in terms of its
 - deoxyribose
 - gold number
 - therapeutic index
 - equilibrium constant

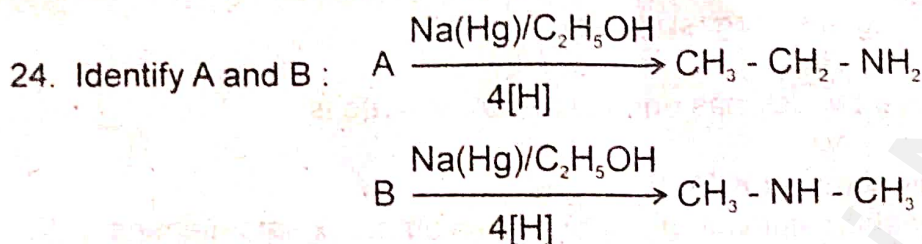
(2)

Part - II

II. Answer any 6 questions. (Q.No.24 is compulsory)

6 x 2 = 12

16. What are the limitations of Ellingham diagram?
17. What are the factors responsible for the anomalous behaviour of first element of the p-block?
18. Why transition elements exhibit variable oxidation state?
19. Give any three characteristics of ionic crystals.
20. What are Lewis acid and bases? Give an example for each.
21. Convert glycerol to acrolein.
22. Give the tests for carboxylic acid group.
23. How is terylene prepared?



Part - III

III. Answer any 6 questions. (Q.No.33 is compulsory)

6 x 3 = 18

25. Give the uses of helium.
26. What are the difference between double salts and coordination compounds?
27. What is meant by Electro Osmosis?
28. Explain pseudo first order reaction with an example.
29. Explain common ion effect with example.
30. State Faraday's laws of electrolysis.
31. State any three advantages of food additives.
32. What are the difference between DNA and RNA?
33. Differentiate Primary, Secondary and Tertiary alcohols using Lucas test.

Part - IV

IV. Answer all the questions.

5 x 5 = 25

34. a) Explain Froth floatation process. (OR)
- b) i) What is inert pair effect?
- ii) How will you prepare bleaching powder?
35. a) What is Lanthanoid contraction? And what are the consequences of Lanthanoid contraction? (OR)
- b) i) Based on the VB theory, explain why $[\text{Ni}(\text{CN})_4]^{2-}$ is diamagnetic.
- ii) What is crystal field splitting energy?
36. a) Write notes on Schottky and Frenkel effect. (OR)
- b) i) Derive an expression for Ostwald's dilution law.
- ii) What are the difference between order and molecularity?
37. a) Derive an expression for Nernst equation. (OR)
- b) What are the characteristics of catalyst?
38. a) Write the mechanism of aldol condensation reaction. (OR)
- b) Write short notes on :
 - i) Mustard oil reaction
 - ii) Gabriel phthalimide synthesis.
