


CK SCHOOL OF PRACTICAL KNOWLEDGE- CUDDALORE-1
FULL TEST - 6
Std : XII – C1, C2 & C3
Marks : 70
Subject : Chemistry
Time : 3 hrs
I. Choose the best answer :
15×1 = 15

- 1) Flux is a substance which is used to convert
 (a) Mineral into silicate **(b) Infusible impurities to soluble impurities**
 (c) Soluble impurities to infusible impurities (d) All of these
- 2) The basic structural unit of silicates is
 (a) $(\text{SiO}_3)^{2-}$ (b) $(\text{SiO}_4)^{2-}$ (c) $(\text{SiO})^-$ **(d) $(\text{SiO}_4)^{4-}$**
- 3) When copper is heated with cone HNO_3 it produces
 (a) $\text{Cu}(\text{NO}_3)_2$, NO and NO_2 (b) $\text{Cu}(\text{NO}_3)_2$ and N_2O
 (c) $\text{Cu}(\text{NO}_3)_2$ and NO_2 (d) $\text{Cu}(\text{NO}_3)_2$ and NO
- 4) The formula for Zeise's salt and Magnus's green salt respectively
 a) $\text{K} [\text{RhCl}(\text{C}_2\text{H}_4)]$ and $[\text{Pt}(\text{Cl}_4)] [\text{Cu}(\text{NH}_3)_4]$
 b) $\text{K} [\text{PtCl}_3(\text{C}_2\text{H}_4)]$ and $[\text{Pt}(\text{NH}_3)_4] [\text{Pt}(\text{Cl}_4)]$
 c) $\text{K}_2 [\text{RhCl}(\text{C}_2\text{H}_4)]$ and $[\text{Cu}(\text{NH}_3)_4] [\text{Pt}(\text{Cl}_4)]$
 d) $\text{K}_3 [\text{RhCl}(\text{C}_2\text{H}_4)]$ and $[\text{Pt}(\text{NH}_3)_2\text{Cl}_2]$
- 5) Which of the following d-block element has half filled penultimate d sub-shell as well as filled valence sub shell ?
 a) Cr b) Pd c) Pt d) none of these
- 6) 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) refraction of light from Na^+ ion
 (d) all of the above
- 7) Acid hydrolysis of an ester is an example of
 (a) zero order reaction (b) Pseudo first order reaction
 (c) second order reaction (d) first order reaction
- 8) Which is wrong statement regarding physisorption ?
 a) It is non-specific b) Heat of adsorption is low
 b) Activation energy is significant d) No transfer of electrons.
- 9) In the Haber's process of the manufacture of ammonia, iron catalyst is poisoned by
 a) Mo b) CO c) As_2O_3 d) H_2S
- 10) Carboic acid is
 (a) Phenol (b) Picric acid (c) benzoic acid (d) phenylacetic acid

- 11) Which of the following represents the correct order of acidity in the given compounds
- $\text{FCH}_2\text{COOH} > \text{CH}_3\text{COOH} > \text{BrCH}_2\text{COOH} > \text{ClCH}_2\text{COOH}$
 - $\text{FCH}_2\text{COOH} > \text{ClCH}_2\text{COOH} > \text{BrCH}_2\text{COOH} > \text{CH}_3\text{COOH}$
 - $\text{CH}_3\text{COOH} > \text{ClCH}_2\text{COOH} > \text{FCH}_2\text{COOH} > \text{BrCH}_2\text{COOH}$
 - $\text{ClCH}_2\text{COOH} > \text{CH}_3\text{COOH} > \text{BrCH}_2\text{COOH} > \text{ICH}_2\text{COOH}$
- 12) Which among the following will not undergo diazotisation?
- m- toluidine
 - aniline
 - p – amino phenol
 - benzylamine
- 13) The IUPAC name of $\text{H}_2\text{N} - (\text{CH}_2)_6 - \text{NH}_2$ is _____
- Hexan – 1, 6 –diamine
 - Hexane – 1, 6 -diamine
 - Hexan diamine
 - Hexane diamine
- 14) Benzene diazonium chloride is added to boiling water to get
- phenol
 - nitrobenzene
 - benzene
 - biphenyl
- 15) Self condensation of two molecules of propanenitrile in presence of sodium ether gives 3 – imino – 2 – methyl pentanenitrile. This reaction is known as
- Thorpe nitrile condensation
 - Levine and Hauser acetylation
 - Baltzschmann reaction
 - Gomberg reaction

II. Answer any 6 questions : Q.No. 24 is compulsory

6 × 2 = 12

- What is the hybridisation of iodine in IF_7 ? Give its structure..
- Define co-ordination number. Give an example.
- Write the hydrate isomers of $\text{CrCl}_3 \cdot 6\text{H}_2\text{O}$
- What is crystal field stabilisation energy ?
- What is homogeneous catalysis ? Give an example.
- What are promoters ? give an example.
- Write Nef carbonyl synthesis.
- Aniline does not undergo Friedel-craft's reaction. Why ?
- Write the IUPAC name of
 - $\text{Na}_2[\text{Ni}(\text{EDTA})]$
 - $[\text{Cr}(\text{en})_3][\text{CrF}_6]$

PART - III

Answer any 6 questions : Q.NO. 33 is compulsory 6 × 3 = 18

- Describe a method for refining nickel.
- What is catenation? describe briefly the catenation property of carbon.
- Describe the preparation of potassium dichromate.
- Give any three characteristics of ionic crystals.
- Give the differences between order and molecularity of a reaction.
- What are Lewis acids and bases? Give two examples for each.

- 31) Write a note on catalytic poison
32) Write Gabriel phthalimide synthesis.
33) What happens when 1 – phenyl ethanol is treated with acidified KMnO_4 .

PART – IV

Answer the following :

5 × 5 = 25

- 34) a) i) Compare lanthanoids and actinoids. (all points) (3)
ii) Transition elements exhibit variable oxidation states. Why ? (2)
(Or)
b) i) Explain zone refining process with an example (3)
ii) Write a note on Fisher tropisch synthesis. (2)
- 35) a) i) Discuss briefly the nature of bonding in metal carbonyls. (3)
ii) What are labile and inert complex ? (2)
(or)
(b) Give the difference b/w chemisorption and physisorption. (all points) (5)
- 36) a) i) Explain intermediate compound formation theory with an example. (3)
ii) What are antibiotics? (2)
(or)
b) Write the postulates of Werner's theory..(all points) (5)
- 37) a) Derive an expression for Ostwald's dilution law. (5)
(or)
b) i) How is chloropicrin prepared ? give its use. (2)
ii) How will you convert nitrobenzene to
a) phenyl hydroxyl amine b) azobenzene c) hydrazobenzene (3)
- 38) a) i) Derive an expression for Nernst equation. (5)
(or)
b) i) How is nylon 6,6 prepared? Mention its use. (2)
ii) Give any three difference between DNA and RNA (3)

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