Mayiladuthurai District Revision Test - 3

Std: 12 **Time: 3.00 Hrs**
Sub: Chemistry **Mars: 70**

Part I

I. Answer all questions. **15 x 1 = 15**

1. Zn is obtained from ZnO by
   a) Carbon reduction b) Reduction using Ag
   c) Electrochemical process d) Acid Leaching
2. Carbon atoms in fullerene with formula C_{60} have
   a) sp^3 hybridised b) sp hybridized
   c) sp^2 hybridised d) Partially sp^2 and partially sp^3 hybridised
3. Bayer's reagent is
   a) Acid mixed with KM_nO_4 b) Base mixed with KM_nO_4
   c) Acid mixed with $K_2Cv_2\ O_7$ d) Base mixed with $K_2Cr_2\ O_7$
4. A magnetic moment of 1.73 BM will be shown by one among the following
   a) $Ticl4$ b) $[CoCl_6]^{-3}$ c) $[Cu(NH)_3]^{+2}$ d) $[Nin(CN)_4]^{-2}$
5. The yellow colour of $Nacl$ 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 the above
6. Half lite period equation for zero order reaction is
   (a) $t\,{}^1/_2 = \frac{[Ao]}{2K}$ (b) $b\,{}^1/_2 = \frac{0.6932}{K}$
   (c) Both a and b (d) None of these
7. The P^H of an aqueous solution zero, The solution is
   a) Slightly acidic b) Strongly acidic
   c) neutral d) basic
8. Which one of the following prevent the corrotion if iron(used as a sacrified anode)
   a) Ag b) Mg and Zn c) Au d) Ni
9. Colldion is 4% solution of _____ in a mixture of alcohol water
   a) Ditroglycerin b) Cellulose acetate
   c) glycol dinitrate d) Ditro cellulose
10. Ethanol $\overset{PCl5}{\rightarrow} X \underset{KOH}{\overset{Alcohol}{\rightarrow}} Y \underset{298K}{\overset{H_2So_4/H2_o}{\rightarrow}} Z,\ Z\ is$
    a) Ethane b) Elthoxyethane c) Ethyl bi sulphate d) Ethanol
11. urotropine is used as
    a) urinary anticeptic b) Analgesic c) Aneasthetic d) Explosive
12. Which one of the following nitroalkane does not shows tautomerion
    a) CH_3NO_2 b) $(CH_3)_2\ CH - No2$
    c) $CH_3\ CH_2 - NO_2$ d) $(CH_3)_3\ C - No_2$
13. $C_6H_5\ NO_2 \overset{Fe/Hcl}{\rightarrow} A \underset{273k}{\overset{NaNo2/Hcl}{\rightarrow}} B \underset{283k}{\overset{H_2O}{\rightarrow}} C,$ Where C is
    a) $C6H5 - OH$ b) $C6H5 - CH_2 - OH$
    c) $C6H5 - CHO$ d) $C_6H_5 - NH_2$
14. Which one of the following is not produced by body
    a) DNA b) Vitamins c) Enzymes d) Harmones
15. The polymer uses in making blankets (artificial Wool) is
    a) Polystyrene b) PAN c) Polyester d) Polythene

Part II

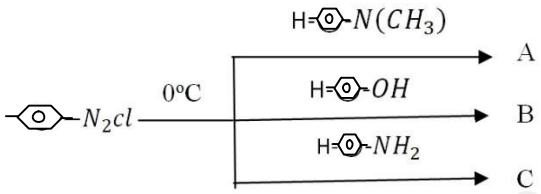
II. Write any six question (Q.No.21 is compulsory) **6 x 2 = 12**

16. Write short notes on Auto Reduction.
17. What is inert pair effect?
18. What is Crystal field Splitting energy?
19. Why ionic Crystals are hard and brittle?
20. What is half life period of a reaction?
21. Why phenol is more acidic than aliphatic alcohols?
22. Write short notes on mustard oil reaction.
23. Define Enzymes
24. What re Sugar substituents? Give examples.

Part III

III. Answer any six questions (Q.No. 31 is compulsory) **6 x 3 = 18**

25. Give the uses of Silicones.
26. Explain why Cr^{+2} is strongly reducing while Mn^{+3} strongly oxidizing?
27. Derive are expression for Ostwald's dilution law'
28. What are the characteristics of Catalyst?
29. Write there test to differentiate alcohol and phenols.
30. Write the Mechanism of Cannizaro reaction.
31. Identify compounds A, B and C



32. What are the importance of Carbohydrates?
33. A Copper electrode is dipped in O.I.M Copper sulphate Solution at 25°C. Calculate the electorate potential of copper (Given: $E^{o}cu^{+2}/Cu = 0.34V$)

Part IV

IV. Answer all questions. **15 x 1 = 15**

34. i) a) What are the various steps involved in the extraction of pure metals from their ores? (2)
    b) Explain the structure of diborane (3) (or)
    ii) a) What are allotrops? Give example (2)
    b) What is lanthanide contraction (3)

35. i) a) What are the main assumptions of valence Bond theory? (5) (or)
    ii) a) Calculate the percentage efficiency of packing incase of body centered cubic crystal (Bcc) (3)
    b) Give any two examples for Zero order reaction ' (2)

36. i) a) What is common ion effect? (2)
    b) Derive an expression for Nernst's equation (3)``(or)
    ii) a) What are the factors affecting adsorption (2)
    b) Explain Electro –osmosis with diagram (3)

37. i) a) Write Saponification reaction for the preparation of glycerol. (3)
    b) How can be prepared either by Williamson either Synthesis? (2)
    (or)
    ii) a) Explain Holoform reaction with example (2)
    b) Give any three test for aldehydes (3)

38. i) a) Explain Tautomerism with example (2)
    b) How can be prepared Nylon -66? Give its uses (3) (or)
    ii) a) Explain the structure of Glucose (5)