

II YEAR CHEMISTRY IPE QUESTION PAPER – MARCH 2009

SECTION - A

I. Answer all the following :

10 × 2 = 20

1. Define "Order" and "Molecularity of a reaction.
2. What is the pH of a solution containing 0.63gm of HNO_3 in 100ml of solution.
3. What is nitrolim ? How is it formed ?
4. What is super phosphate of lime ? Write the equation for the preparation of super phosphate of lime.
5. Give the composition of Nichrome and Brass.
6. Mention the names of the monomers for preparing Bakelite and Teflon.
7. Define antiseptics. Give examples.
8. How is aspirin prepared ? Write an equation.
9. What is Williamson's synthesis ? Give an equation.
10. Complete the following statements.

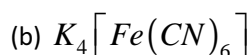
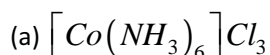


SECTION - B

II. Answer any six of the following :

6 × 4 = 24

11. Define mole fraction. A solution contains 90gm of H_2O , 6.4gm of methanol and 18.4gm of glycerol. What is the mole fraction of glycerol.
12. Derive Bragg's equation.
13. State Faraday's first law. A current of 0.25 amp is passed through a $CuSO_4$ solution for 45 minutes. Calculate the mass of copper deposited on the cathode. (Atomic weight of Cu = 63.6)
14. Write any four differences between physical adsorption and chemical adsorption.
15. Define the following terms :
 - (a) Heat of formation
 - (b) Heat capacity
 - (c) Hess's law of constant heat summation
 - (d) Heat of neutralization
16. Write short notes on each of the following ?
 - (a) Roasting
 - (b) Calcination
17. Define EAN. Calculate the EAN of the following metals in their respective complexes.



18. Give the sources and deficiency diseases of the following vitamins.

(a) A

(b) D

(c) E

(d) K

SECTION - C

III. Answer any two of the following:

2 × 8 = 16

19. State and explain Le – Chatelier’s principle. Apply the same to the equilibrium.



20. a) How is ozone prepared in the Siemen’s method ?

b) Give the reaction of bleaching powder with the following.

(i) Excess of dilute acid

(ii) Ethanol

(iii) CO_2

(iv) H_2O

21. Write any two methods of the preparation of aniline. Give the reaction of aniline with the following.

(a) CH_3X

(b) CH_3COCl

(c) $CHCl_3 + Alc.KOH$

(d) $NaNO_2 + HCl$