

## REVISION TEST -III

**CLASS : 11<sup>TH</sup> STD**

**MARKS : 70**

**SUB : CHEMISTRY (VOLUME-II)**

**TIME : 3.00HRS**

## PART-I

### CHOOSE THE CORRECT ANSWER

**15 X 1 = 15**

1.  $Q > K_C$  this type of reaction is \_\_\_\_\_  
a) equilibrium state  
b) formation of products  
c) formation of reactant  
d) both a and c
2. Which one of the following is incorrect statement ?  
a) for a system at equilibrium,  $Q$  is always less than the equilibrium constant  
b) equilibrium can be attained from either side of the reaction  
c) presence of catalyst affects both the forward reaction and reverse reaction to the same extent  
d) Equilibrium constant varied with temperature
3. According to Valence bond theory, a bond between two atoms is formed when  
a) fully filled atomic orbitals overlap  
b) half filled atomic orbitals overlap  
c) non-bonding atomic orbitals overlap  
d) empty atomic orbitals overlap
4. molecular geometry of  $SF_6$  is \_\_\_\_\_  
a) octahedral  
b) Square pyramidal  
c) Square planar  
d) pentagonal bi-pyramidal
5. Shape and hybridisation of  $IF_5$  are  
a) Trigonal bipyramidal,  $sp^3d^2$   
b) Trigonal bipyramidal,  $sp^3d$   
c) Square pyramidal,  $sp^3d^2$   
d) Octahedral,  $sp^3d^2$
6. The geometrical shape of carbocation  
(a) Linear  
(b) Planar  
(c) tetrahedral.  
(d) Pyramidal
7. Which of the following is optically active  
a) 2-methyl pentane  
b) citric acid  
c) Glycerol  
d) none of these
8. Benzene is treated with methyl chloride in the presence of anhydrous aluminium chloride \_\_\_\_\_ is formed  
a) chlorobenzene  
b) toluene  
c) acetophenone  
d) cyclohexane
9. The raw material for Raschig process  
a) chloro benzene  
b) phenol  
c) benzene  
d) anisole
10. Silverpropionate when refluxed with Bromine in carbon tetrachloride gives  
a) propionic acid  
b) chloro ethane  
c) bromo ethane  
d) chloro propane
11. Which of the following compounds will not undergo Friedel-Crafts reaction easily ?  
a) Nitro benzene  
b) Toluene  
c) Cumene  
d) Xylene
12. An alkane is obtained by decarboxylation of sodium propionate. Same alkane can be prepared by  
a) Catalytic hydrogenation of propene.  
b) action of sodium metal on iodomethane  
c) reduction of 1-chloro propane.  
d) reduction of bromomethane
13. Of the following compounds, which has the highest boiling point?  
a) n-Butyl chloride.  
b) Isobutyl chloride  
c) t-Butyl chloride.  
d) n-propyl chloride
14. C-X bond is strongest in  
a) Chloromethane.  
b) Iodomethane  
c) Bromomethane.  
d) Fluoromethane

15. Freon-12 is manufactured from tetrachloro methane by
- Wurtz reaction.
  - Swarts reaction
  - Haloform reaction
  - Gattermann reaction

### PART-II

**ANSWER THE FOLLOWING ANY SIX QUESTIONS**

**6 X 2 = 12**

**NOTE : QUESTION NO : 24 IS COMPULSORY**

- What is the effect of added inert gas on the reaction at equilibrium ?
- Write limitation of Henry's law ?
- Define hybridisation ?
- What is optical isomerism with suitable example ?
- What are electrophile and nucleophile? Give suitable ?
- How will you convert ethyl chloride into i) ethane. ii) n-butane
- Write the following reaction down process
- If there is no change in concentration, why is the equilibrium state considered dynamic?
- What is green chemistry?

### PART-III

**ANSWER THE FOLLOWING ANY SIX QUESTIONS.**

**6 X 3 = 18**

**NOTE : QUESTION NO : 33 IS COMPULSORY**

- State Le-Chatelier principle
- Define i) molality. ii) Normality
- Explain the covalent character in ionic bond.
- Explain paper chromatography
- How does Huckel rule help to decide the aromatic character of a compound
- What are freons? Discuss their uses and environmental effects
- Explain how does green house effect cause global warming
- 2.82 g of glucose is dissolved in 30g of water. Calculate the mole fraction of glucose and water

### PART-IV

**ANSWER ALL THE QUESTIONS.**

**5 X 5 = 25**

- Derive the relation between  $K_p$  and  $K_c$   
(OR)  
b) state Raoult's law and obtain expression for lowering of vapour pressure when non volatile solute is dissolved in solvent.
- a) describe Fajan's rule  
(OR)  
b) give the general characteristics of organic compounds
- a) Give examples for the following types of organic reactions  
i) beta – elimination reaction  
ii) electrophilic substitution  
(OR)  
b) i) suggest a simple chemical test to distinguish propane and propene  
ii) write the chemical equations for combustion of n-butane
- a) starting from  $\text{CH}_3\text{MgI}$ , how will you prepare the following?  
i) acetic acid. ii) Acetone. iii) ethyl acetate  
(OR)  
b) what are the various methods you suggest to protect our environment from pollution?
- a) write the molecular and possible structural formula of the first four members of homologous series of carboxylic acids  
(OR)  
b) derive the Van't Hoff equation

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