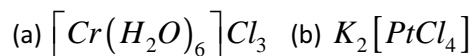


SECTION - A

I. Answer all the following :

10 × 2 = 20

1. What is meant by Frenkel and Schottky defects ?
2. What is Doping ?
3. Write the systematic names for the following.



4. What is PHBV ? How is it useful to man ?
5. Give the deficiency diseases caused by the vitamins A, C, D and K.
6. What is Peptide linkage ? Give an example.
7. Define Antihistamines. Give an example.
8. How is paracetamol is prepared ? Give equation.
9. What is Chloropicrin ? How it is formed from chloroform ? Give equation.
10. The reactant 'A' is reduced to Azobenzene with  $LiAlH_4$ . What is 'A' ? Give equation.

SECTION - B

II. Answer any six of the following :

6 × 4 = 24

11. What is Colligative property ? Give any three examples.
12. Define pH ? What is the pH of 0.005M  $Ba(OH)_2$  solution ?
13. What is homogeneous and heterogeneous catalysis ? Give an example for each.
14. State Hess's law of constant heat summation and explain with example.
15. Explain how superphosphate of lime is manufactured.
16. How is bauxite purified by Serpeck's process ?
17. Define first law of Faraday's electrolysis. A current of 10 amp is passed through molten  $AlCl_3$  for 96.5 seconds. Calculate the mass of Al deposited at cathode. (Atomic weight of Al = 27)
18. Explain any two characteristic properties of transition elements.

SECTION - C

III. Answer any two of the following :

2 × 8 = 16

19. (a) How is bleaching powder prepared industrially ?

(b) Give the reactions of ozone with the following and give equations.

(i)  $SO_2$

(ii) PbS

(iii)  $BaO_2$

(iv) Hg

20. Define Rate of reaction. Explain the factors which influence rate of reaction.

21. Explain the preparation of ethyl alcohol from molasses. What happens when ethyl alcohol is treated with

(a)  $CH_3MgI$

(b)  $PCl_5$

(c) Conc.  $H_2SO_4$  at  $140^\circ C$

(d)  $CH_3COOH$

