**QUESTIONS ON CHEMICAL BONDING**

1. The coupling between base units of DNA is through
2. **Hydrogen bonding**  b. electrostatic bonding

c. covalent bonding d. Vander Waals forces

2. The force present in the crystals of Naphthalene is

1. **Vander Waals forces** b. electrostatic bonding

c. Hydrogen bonding d. None of these

3. The value of bond order in Nitrogen molecule is

**a. 3** b. 4 c. 2 d. 1

4. Intramolecular hydrogen bonding is present in

a. water b. ethyl alcohol c. acetic acid **d. Salicylic acid**

5. Which of the following bonds requires the largest amount of energy to dissociate into atoms concerned ?

 a. H-H bond in H2 b. C-H bond in CH4 C. O=O bond in O2 d. N =N bond in N2

6. Banana bond is formed in

a. Borazine b. Boron nitride **c. Diborane** d. none of these

7. What happens when a chemical bond is formed?

(a) Energy is always absorbed **(b) Energy is always released** (c)More energy is released than it absorbed (d)Energy is neither released nor absorbed

8. The product of equivalent weight and valency of an element is equal to

(a) vapour density (b)specific heat (c)atomic weight **(d)molecular weight**

9. The number of valence electrons in the O2-ion is

(a)4 (b)6 **(c)8** (d) 10

10. If formula of sodium salt of an anion X is Na2X, then the formula of its aluminium salt would be

(a) AIX (b)AIX3 **(c)AI2X3** (d)AI3X2

11. Example of ionic bond are

**(a)NaCl, KCl, MgF2,CaCl2** (b) H2, Cl2, O2, N2,CH2 (c) SO2,SO3, O3 (d)H2O, NH3

12. An atom of sodium loses one electron and chlorine atom accepts one electron. This result the formation of sodium chloride molecule. This type of molecule will be

(a)coordinate (b)covalent **(c)electrovalent** (d)metallic bond

13. Molten NaCl is a good conductor of electricity is due to

(a)free electrons **(b)free ions** (c)free molecules (d)None of these

14. How many covalent bounds are present in a Chloropropane molecule having molecular formula, C3H2Cl ?

(a)6 (b)8 (c)9 **(d)10**

15. Covalent compounds are generally

(a) soluble in water **(b)insoluble in water** (c) ionise in water (d)hydrolyse in water

16. The methane molecule has

(a)double bond (b) triple bond **(c)single covalent bond** (d)None of the above

17. In double covalent bond there is a sharing of

(a)two electrons **(b)four electrons** (c)six electrons (d)three electrons

18. Proton play an important role in which type of bonding?

(a)Electrovalent (b)Hydrogen (c)Covalent **(d)Coordinate** **Covalent**

19. The type of bond formed during the hydration of cation is

(a)ionic (b) covalent (c)electrostatic **(d)dative bond**

20. The bond which is present between water molecules is

(a) electrovalent bond (b)covalent bond **(c)hydrogen bond** (d)vander Waal’s bond

21. Which of the following bond is the weakest?

(a)Coordinate bond (b)Hydrogen bond **(c)Vander Waals’ forces** (d)Covalente bond

22. A metallic bond is

(a) ionic (b)polar covalent (c)non-polar covalent **(d)electrostatic in nature**

23**.** An odd electron molecule among the following is

1. CO b. SO2 c. CO2 **d. NO**

24. Which one of the following contains ionic, covalent and co-ordinate bonds?

1. NaOH b. NaCl c. NaCN **d. NH4Cl**

25. Oxidation state of Ni in Ni(CO)4 is

1. **O** b. +1 c. +2 d. +3

26. The dipole moments of CCl4, CHCl3 and CH4 are in the order

1. **CH4 = CCl4<CHCl3**b CHCl3< CH4 = CCl3 c. CH4 < CCl4<CHCl3  d. CCl4< CH4< CHCl3

27. Which of the following possess net dipole moment?

1. **SO2** b. BF3 c. BeCl2 d. CO2

28. Among the following, the molecule that will have the highest dipole moment is

1. HI b. HBr C. HCl **d. HF**

29. Intramolecular hydrogen bond is present in

1. Water **b. O-nitrophenol** c. p-nitrophenol d. ethanol

30. The oxidation number of sulphur is S8 molecule is

1. 6 b.O c. 2 d. 3