Co-ordinate or Dative bonding

1. Which species has the maximum number of lone pair of electrons on the central atom?
(a) $[ClO_3]^-$ (b) XeF_4
(c) SF_4 (d) $[I_3]^-$

2. A simple example of a coordinate covalent bond is exhibited by
(a) C_2H_2 (b) H_2SO_4
(c) H_2O (d) HCl

3. The bond that exists between NH_3 and $BF_3$is called
(a) Electrovalent (b) Covalent
(c) Coordinate (d) Hydrogen

4. Which of the following does not have a coordinate bond
(a) SO_2 (b) HNO_3
(c) H_2SO_3 (d) HNO_2

5. Coordinate covalent compounds are formed by
(a) Transfer of electrons
(b) Sharing of electrons
(c) Donation of electrons
(d) None of these process

6. In the coordinate valency
(a) Electrons are equally shared by the atoms
(b) Electrons of one atom are shared with two atoms
(c) Hydrogen bond is formed
(d) None of the above

7. Which of the following contains a coordinate covalent bond
(a) N_2O_5 (b) $BaCl_2$
(c) HCl (d) H_2O

8. A coordinate bond is formed when an atom in a molecule has
(a) Electric charge on it
(b) All its valency electrons shared
(c) A single unshared electron
(d) One or more unshared electron pair

9. Which has a coordinate bond
(a) SO_3^{2-} (b) CH_4
(c) CO_2 (d) NH_3

10. The compound containing co-ordinate bond is
(a) O_3 (b) SO_3
(c) H_2SO_4 (d) All of these

11. The number of dative bonds in sulphuric acid molecules is

(a) 0 (b) 1

(c) 2 (d) 4

12. Which of the following compounds has coordinate (dative) bond

(a) CH_3NC (b) CH_3OH

(c) CH_3Cl (d) NH_3

13. The structure of orthophosphoric acid is

(a) $H-O-\overset{\overset{O}{\uparrow}}{\underset{\underset{H}{|}}{\underset{O}{|}}{P}}-O-H$

(b) $O \leftarrow \overset{\overset{H}{|}}{\underset{\underset{H}{|}}{P}}-O-H$

(c) $O \leftarrow \overset{\overset{H}{|}}{\underset{|}{\overset{H}{|}}{P}}-O-H$

(d) $H-O-\overset{\overset{O}{\uparrow}}{P}=O$

14. What is the nature of the bond between *B* and *O* in $(C_2H_5)_2OBH_3$

(a) Covalent

(b) Co-ordinate covalent

(c) Ionic bond

(d) Banana shaped bond

15. Sulphuric acid provides a example of

(a) Co-ordinate bonds

(b) Non-covalent compound

(c) Covalent and co-ordinate bond

(d) Non-covalent ion