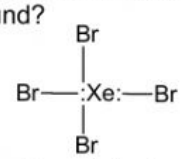
10. What is the unusual feature about this compound?



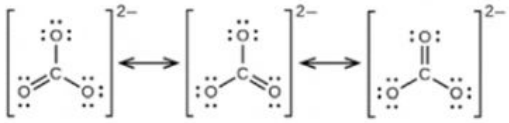
A. Obey the octet rule

B. Odd number electron

C. Incomplete octet

D. Expended octet

11. What is the picture showing?



A. The resonance structure of carbonate ions.

B. The formal charge of each atom in carbonate.

C. The electronegativity of carbonate.

D. The geometrical shape of carbonate.

12. Choose the **CORRECT** statement regarding PH_4^+ molecule.

A. The H-P-H bond angles are less than 109.5º.

B. The P-H bonds are polar, and the molecule is polar.

C. The molecular geometry is tetrahedral.

D. It has the same geometry as NF_3.

13. The F-Cl-F bond angles in ClF_3 are expected to be

A. 90° and 120° C. <90° and <120°

B. <90° D. <120°

14. By using VSEPR theory, predict the geometry of hydronium, H_3O^+.

A. Trigonal planar

B. Trigonal bipyramidal

C. Tetrahedral

D. Trigonal pyramidal

15. Which of the following substance is/are *planar*?

(i) SO_3	(ii) SO_3^{2-}	(iii) NO_3^-
(iv) PF_3	(v) BF_3	

A. (i) and (ii)

B. (i), (iii), and (v)

C. only (iv)

D. all are planar except (iv)

16. Which one of the following molecules is ***non-polar***?

A. OF_2 C. H_2O

B. CH_3Cl D. BF_3

17. Which of the following molecules have the **SAME** geometries?

A. SF_4 and CH_4 C. CO_2 and BeH_2

B. CO_2 and H_2O D. N_2O and NO_2

18.

Element	No. of valence electrons
Si	4
P	5
S	6

The above elements form covalent compound when combined with Hydrogen, H. Of the following sequences, which shows decreasing order of bond angles?

A. $H_2S > PH_3 > SiH_4$

B. $H_2S > SiH_4 > PH_3$