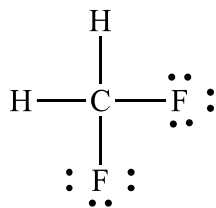


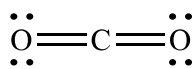
**Solutions to Problems
Lewis Structures and VSEPR**

1.



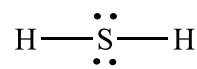
SN = 4; tetrahedral
polar

2.



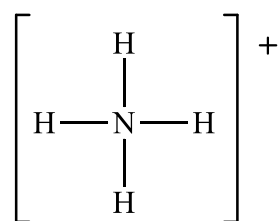
SN = 2; linear
nonpolar

3.



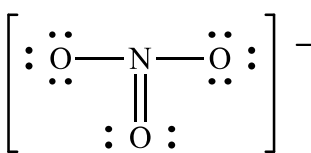
SN = 4, 2 lone pairs
bent, polar

4.



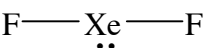
SN = 4; tetrahedral
nonpolar

5.



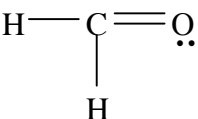
SN = 3; trigonal planar
nonpolar

6.



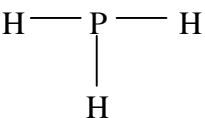
SN = 5, 3 lone pairs; linear, nonpolar

7.



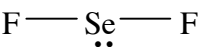
SN = 3; trigonal planar, polar

8.

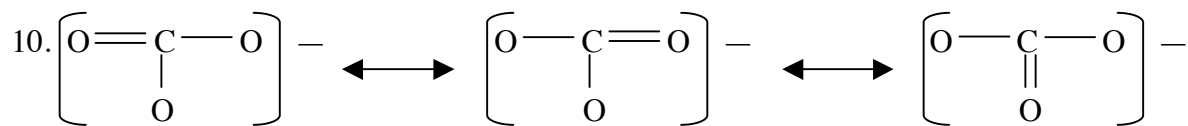


SN = 4, 1 lone pair; trigonal pyramidal, polar

9.

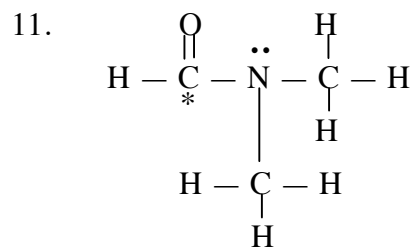


SN = 4, 2 lone pairs; bent, polar



Note there are 2 lone pairs on each double-bonded O atom and 3 lone pairs on each single-bonded O atom.

SN = 3; trigonal planar, nonpolar



Specify the geometry at EACH 'central' atom (those bonded to more than 1 other atom):

C* : SN = 3; trigonal planar

Other C's: SN = 4; tetrahedral

N: SN = 4, 1 lone pair; trigonal pyramidal

Polar molecule