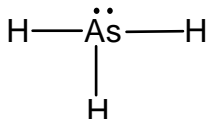


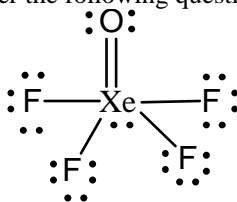
Name \_\_\_\_\_

Given the correct Lewis structure below, answer the following questions. [5 pts]



1. What is the **electron pair arrangement** of the central atom?  
a) linear      b) trigonal planar      c) **tetrahedral**      d) trigonal bipyramidal      e) octahedral
2. What is the **molecular geometry** about the central atom?  
a) **trigonal pyramid**      b) trigonal planar      c) tetrahedral      d) trigonal bipyramidal  
e) bent
3. What is/are the **bond angle(s)** in the molecule?  
a) 90°      b) 120°      c) **109°**      d) 180°      e) 90°, 120°
4. What is the **polarity** of the molecule?  
a) **polar**      b) nonpolar
5. What **hybrid orbitals** are used by the central atom in bonding?  
a) *sp*      b) *sp*<sup>2</sup>      c) *sp*<sup>3</sup>      d) *sp*<sup>3</sup>*d*      e) *sp*<sup>3</sup>*d*<sup>2</sup>

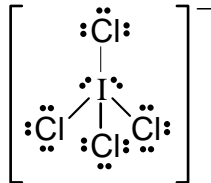
Given the correct Lewis structure below, answer the following questions. [5 pts]



6. What is the **electron pair arrangement** of the central atom?  
a) linear      b) trigonal planar      c) tetrahedral      d) trigonal bipyramidal      e) **octahedral**
7. What is the **molecular geometry** about the central atom?  
a) see-saw      b) square planar      c) **square pyramid**      d) trigonal bipyramidal      e) octahedral
8. What is/are the **bond angle(s)** in the molecule?  
a) 60°      b) 180°      c) **90°, 180°**      d) 120°      e) 109°
9. What is the **polarity** of the molecule?  
a) **polar**      b) nonpolar
10. What **hybrid orbitals** are used by the central atom in bonding?  
a) *sp*      b) *sp*<sup>2</sup>      c) *sp*<sup>3</sup>      d) *sp*<sup>3</sup>*d*      e) *sp*<sup>3</sup>*d*<sup>2</sup>

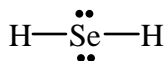
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Given the correct Lewis structure below, answer the following questions. [5 pts]



11. What is the *electron pair arrangement* of the central atom?  
a) linear      b) trigonal planar      c) tetrahedral      d) trigonal bipyramidal      e) **octahedral**
12. What is the *geometry* about the central atom?  
a) see-saw      b) **square planar**      c) square pyramid      d) tetrahedral      e) octahedral
13. What is/are the *bond angle(s)* in the molecule?  
a) 60°      b) 180°      c) **90°, 180°**      d) 90°      e) 109°
14. What is the *polarity* of the molecule?  
a) polar      b) **nonpolar**
15. What *hybrid orbitals* are used by the central atom in bonding?  
a) sp      b) sp<sup>2</sup>      c) sp<sup>3</sup>      d) sp<sup>3</sup>d      e) **sp<sup>3</sup>d<sup>2</sup>**
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Given the correct Lewis structure below, answer the following questions. [5 pts]



16. What is the *electron pair arrangement* of the central atom?  
a) linear      b) trigonal planar      c) **tetrahedral**      d) trigonal bipyramidal      e) octahedral
17. What is the *geometry* about the central atom?  
a) **bent**      b) linear      c) trigonal planar      d) tetrahedral      e) t-shaped
18. What is/are the *bond angle(s)* in the molecule?  
a) 180°      b) 90°, 120°      c) 120°      d) 90°, 180°      e) **109°**
19. What is the *polarity* of the molecule?  
a) **polar**      b) nonpolar
20. What *hybrid orbitals* are used by the central atom in bonding?  
a) sp      b) sp<sup>2</sup>      c) **sp<sup>3</sup>**      d) sp<sup>3</sup>d      e) sp<sup>3</sup>d<sup>2</sup>
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