

- 9) The type of compound that is most likely to contain a covalent bond is
- one that is composed of only nonmetals
 - one that is composed of a metal *from the far left* of the periodic table and a nonmetal *from the far right* of the periodic table
 - a solid metal
 - held together by the electrostatic forces between oppositely charged ions
 - There is no general rule to predict covalency in bonds.
- 10) Of the atoms below, _____ is the least electronegative.
- Rb
 - Si
 - Cl
 - F
 - Ca
- 11) Which of the following has the bonds correctly arranged in order of increasing polarity?
- N-F, Be-F, Mg-F, O-F
 - Mg-F, Be-F, N-F, O-F
 - O-F, N-F, Be-F, Mg-F
 - Be-F, Mg-F, N-F, O-F
 - O-F, Be-F, Mg-F, N-F
- 12) A valid Lewis structure of _____ cannot be drawn without violating the octet rule.
- SbF₃
 - SO₄²⁻
 - IF₃
 - PF₃
 - NF₃
- 13) How many equivalent resonance forms can be drawn for SO₂ without expanding octet on the sulfur *atom* (sulfur is the central *atom*)?
- 3
 - 4
 - 1
 - 2
 - 0
- 14) A nonpolar bond will *form* between two _____ atoms of _____ electronegativity.
- identical, different
 - similar, different
 - identical, equal
 - different, different
 - different, opposite
- 15) Of the molecules below, the bond in _____ is the most polar.
- H₂
 - HCl
 - HBr
 - HF
 - HI
- 16) Based on the octet rule, phosphorus most likely forms a _____ ion.
- P⁺
 - P³⁻
 - P⁵⁺
 - P⁵⁻
 - P³⁺
- 17) How many resonance forms can be drawn for CO₃²⁻ (carbon is the central *atom*)?
- 4
 - 1
 - 0
 - 2
 - 3
- 18) A valid Lewis structure of _____ cannot be drawn without violating the octet rule.
- CF₄
 - BeH₂
 - NF₃
 - SO₂
 - SO₃²⁻

Answer Key

Testname: BONDING I.TST

MDL TIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) A
- 2) D
- 3) E
- 4) E
- 5) C
- 6) A
- 7) A
- 8) D
- 9) A
- 10) A
- 11) C
- 12) C
- 13) 0
- 14) C
- 15) D
- 16) B
- 17) E
- 18) B