

Chemical Bonding

Sr	Questions	Answers Choice
1	Which of the following statemtn not correct regarding bounding molecular oritals.	<p>A. <p>Bonding molecular orbital posses less energy than atomic orbitals&nbsp; from which they are formed</p></p> <p>B. <p>Bonnding molecular orbitals have&nbsp; low electron density betwene the two nucle</p></p> <p>C. <p>Every electron in the boundg molecular orbitals contributes to the attraction between atoms.</p></p> <p>D. <p>Bonding molecular orbitals are formed whn the electron waves undergo constructive interference&nbsp;</p></p>
2	The expected bond energy of HCl is lesser than the actual, this is because.	<p>A. <p>Size of hydrogen is very small</p></p> <p>B. <p>HCl is non polar compund</p></p> <p>C. <p>HCl is a polar comooound</p></p> <p>D. <p>There exists hydrogen bonding</p></p>
3	Which of the following species contains a dative bond.	<p>A. <p>NH4</p></p> <p>B. <p>CH4</p></p> <p>C. <p>SO2</p></p> <p>D. <p>PCl5</p></p>
4	How many electrons are presente in the valence shell of P in PO4 ³⁻	<p>A. <p>8</p></p> <p>B. <p>10</p></p> <p>C. <p>12</p></p> <p>D. <p>14</p></p>
5	The molecuel with greatest dipole moment is.	<p>A. <p>H2O</p></p> <p>B. <p>H2S</p></p> <p>C. <p>NH3</p></p> <p>D. <p>HF</p></p>
6	Which one is a non polar molecule.	<p>A. <p>CS2</p></p> <p>B. <p>CaC2</p></p> <p>C. <p>H2S</p></p> <p>D. <p>CaCl2</p></p>
7	Which of the following species has unpaired electrons in antibonding molecular orbitals.	<p>A. <p>O2<sup>2+</sup></p></p> <p>B. <p>N 2&nbsp;<sup>2-</sup></p></p> <p>C. <p>B</p></p> <p>D. <p>F2</p></p>
8	The actual bond length in a polar covalent compound is.	<p>A. <p>Lesser thanexpected</p></p> <p>B. <p>Greeter ahtn expected</p></p> <p>C. <p>Equal to the expected</p></p> <p>D. <p>Exactly half of expected</p></p>
9	Octet rule is not obeyed b which of the following compounds during its formation	<p>A. <p>H2O</p></p> <p>B. <p>NaCl</p></p> <p>C. <p>NH3</p></p> <p>D. <p>PF5</p></p>
10	How many extra electrons than a normal octet are there in the valence shell of I in ICl5?	<p>A. <p>2</p></p> <p>B. <p>3</p></p> <p>C. <p>4</p></p> <p>D. <p>5</p></p>
11	An ionic compound A+B is most likely to be formed when	<p>A. <p>The ionization eenergy of A is high and electron affinity of B is low&nbsp;</p></p> <p>B. <p>The ionization energy of A is low and electron affinity of B is high</p></p> <p>C. <p>Boht the ionization energy of A and electron affinity of B are high</p></p> <p>D. <p>Both the ionization energy of A and electron affinity of B are low.</p></p>

12	What is bond angle in NF ₃ ?	<p>B. 109.5°</p> <p>C. 104.5°</p> <p>D. 107.5°</p>
13	Which of the following molecules has zero dipole moment.	<p>A. BF₃</p> <p>B. NH₃</p> <p>C. H₂O</p> <p>D. CHCl₃</p>
14	Which of the following molecules has zero dipole moment.	<p>A. BF₃</p> <p>B. NH₃</p> <p>C. CHCl₃</p> <p>D. H₂O</p>
15	Sp ³ Hybridization is associated with structure.	<p>A. Linear</p> <p>B. Tetrahedral</p> <p>C. Trigonal</p> <p>D. Octahedral</p>
		<p>A. One σ bond and three π bonds</p> <p>B. The numbers of σ bonds and π bonds are 4 and 0 respectively.</p> <p>C. The numbers of σ bonds and π bonds are 3 and 1 respectively.</p> <p>D. The numbers of σ bonds and π bonds are 2 and 2 respectively.</p>

- B. Force of repulsion is greater than force of attraction
- C. Force of attraction overcomes force of repulsion
- D. None of these