

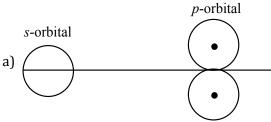
Subject : CHEMISTRY DPP No. : 4 Class: XIth

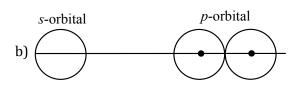
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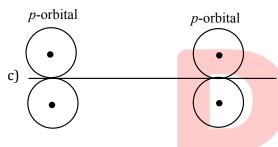
hemical Bonding and Molecular Structur

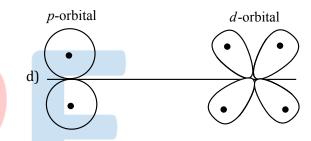
Which of the followi a) Pb ²⁺	ng is most stable b) Ge ²⁺			d) Sn ²⁺	
In which of the following compound sp^2 hybrid a) $CH_2 = CH - CH = CH_2$ c) $CH_2 - CH = CH_2$		b) CH :	disation is absent? b) $CH \equiv C - CH_2 - CH_3$ d) $CH_2 = CH - CH_2 - CH_3$		
				er: d) O_2^- and CN $^-$	
Which of the following characteristics regarding halogens is not correct? a) Ionization energy decreases with increase in atomic number. b) Electronegativity decreases with increase in atomic number. c) Electron affinity decreases with increase in atomic number. d) Enthalpy of fusion increases with increase in atomic number.					
The number of S – S a) Three	bonds in sulphur b) Two			d) Zero	
a) Induced dipole – ib) Dipole – induced oc) Hydrogen bondin	nduced dipole in dipole interactior g interactions	teractions			
(i) H_2O (ii) NH_4 (iv) ClO_4^- (v) NH_3	(iii)SO ₄ ²⁻	ormation of b) (i),	. ,) and (v)	
	a) Pb ²⁺ In which of the followa a) CH ₂ = CH – CH = c) CH ₂ – CH = CH ₂ Which one of the following a) NO ⁺ and CN ⁺ Which of the following a) Ionization energy b) Electronegativity c) Electron affinity dd) Enthalpy of fusion The number of S – Sa) Three The low density of idea a) Induced dipole – idea a) Induced dipole – idea b) Dipole – induced dc) Hydrogen bonding d) Dipole –dipole into Consider the following (i) H ₂ O (ii) NH ₄ (iv) ClO ₄ (v) NH ₃ sp ³ hybridisation is a) (i), (ii) (v) only	a) Pb ²⁺ b) Ge ²⁺ In which of the following compound so a) CH ₂ = CH - CH = CH ₂ c) CH ₂ - CH = CH ₂ Which one of the following pairs of span a) NO ⁺ and CN ⁺ b) CN ⁻ and Now which of the following characteristics a) Ionization energy decreases with incomplete comparison of the following characteristics a) Ionization energy decreases with incomplete comparison increases with incomplete comparison increases with incomplete comparison of the following increases with incomplete comparison of the following increases with incomplete comparison of the following interaction of the following interaction of the following molecules or incomplete complete compl	In which of the following compound sp^2 hybridisation a) $CH_2 = CH - CH = CH_2$ b) $CH_2 = CH_2 - CH = CH_2$ d) $CH_2 = CH_2 - CH_2$	a) Pb^{2+} b) Ge^{2+} c) Si^{2+} In which of the following compound sp^2 hybridisation is absent? a) $CH_2 = CH - CH = CH_2$ b) $CH = C - CH_2 - C$ c) $CH_2 - CH = CH_2$ d) $CH_2 = CH - CH_2$ Which one of the following pairs of species has the same bond ord a) NO^+ and CN^+ b) CN^- and NO^+ c) CN^- and CN^+ Which of the following characteristics regarding halogens is not coa) Ionization energy decreases with increase in atomic number. b) Electronegativity decreases with increase in atomic number. c) Electron affinity decreases with increase in atomic number. d) Enthalpy of fusion increases with increase in atomic number. The number of $S - S$ bonds in sulphur trioxide is a) Three b) Two c) One The low density of ice compared to water is due to a) Induced dipole – induced dipole interactions b) Dipole – induced dipole interaction c) Hydrogen bonding interactions d) Dipole –dipole interaction Consider the following molecules or ions (i) H_2O (ii) NH_4^+ (iii) SO_4^{2-} (iv) CIO_4^{2-} (v) NH_3 sp³ hybridisation is involved in the formation of a) (i), (ii) (v) only b) (i), (ii) only	

- 8. Which of the following compounds has dipole moment approximately equal to that of chlorobenzene?
 - a) o-dichlorobenzene
 - b) m-dichlorobenzene
 - c) p-dichlorobenzene
 - *p*-chloronitrobenzene
- 9. Which of the following overlaps leads to bonding?









- 10. Which of the following is correct?
 - a) The number of electrons $\frac{1}{2}$ present in the valence shell of S in SF₆ is 12.
 - b) The rates of ionic reactions are very low.
 - c) According to VSEPR theory, SnCI₂ is a linear molecule.
 - The correct order of ability to form ionic compounds among Na⁺, Mg²⁺ and Al³⁺ is Al³⁺ > M g²⁺ > Na⁺.
- 11. The number of sigma and pi bonds in peroxodisulphuric acid are respectively
 - a) 9 and 4
- b) 11 and 4
- c) 4 and 8
- d) 4 and 9

- 12. Which is not a paramagnetic species?
 - a) 0₂

b) 0_2^+

c) 0₂

d) 0_2^{2-}

- 13. In piperidine N—H, N atom has hybridization:
 - a) sp

- b) sp^2
- c) sp^3

 $d) dsp^2$

- 14. Electron deficient species are known as:
 - a) Lewis acids
- b) Hydrophilic
- c) Nucleophiles
- d) Lewis bases

15.	The molecule having that a) NH_3	nree folds of axis of sym b) PCl ₅	metry is: c) SO ₂	d)CO ₂
16.	The structure of ICl ₂ is a) Trigonal b) Octahedral c) Square planar d) Distorted trigonal bi			
17.	Among the following that a) CH ₃ Cl	ne molecule with the hig b) $\mathrm{CH_2Cl_2}$	ghest dipole moment is c) CHCl ₃	d) CCl ₄
18.	Which of the following a) PO_4^{3-}	is not isostructural wit b) NH ₄ ⁺	h SiCl ₄ ? c) SCl ₄	d) SO ₄ ²⁻
19.	A molecule which cann a) SF_4	ot exist theoretically is:	c) OF ₄	d) O ₂ F ₂
20.	An atom X has three various formed between them a) X_2Y_6		om Y has six valence elec	trons. The compound $\mathrm{d}(X_3Y_2)$