

Q:1 Give any two Answer of following question.

1. Give following answer's for SP^2 hybridization.
(A) Write wave function for Hybrid orbitals.
(B) Calculate all co-efficient's value.
(C) Calculate the Bond angle between SP^2 -hybride orbitals.
2. Explain Magnetic properties of $[CO(NH_3)_6]^{+3}$ and nature of $d\pi-p\pi$ bond according molecular orbital's theory.
3. Explain physical meaning of H_{ii} and H_{ij} .

Q:2 (A) Give any two Answer of following question.

1. Explain the classification of metal carbonyl compounds with example.
2. Explain the modern structure of following metal carbonyl compounds.
Hexa Carbonyl Cromium, Iron do-deca Carbonyl.
3. Explain with example of 18 electron rule for metal carbonyl compounds.

(B) Give any one Answer of following question.

1. Discuss the properties of Sodium nitropruside compounds.
2. Calculate EAN : $Fe_2(CO)_9$, $Mn_2(CO)_{10}$

Q:3 (A) Give any two Answer of following question.

1. Write note on Nitrogen Fixation.
2. Short note on : Metallo porphyrde compounds.
3. Discuss : Hemoglobin & Myoglobin.

(B) Give any two Answer of following question.

1. What is Bio-Inorganic chemistry?
2. Define : Nitrogenase Compounds.
3. Explain : Trace Elements.