

41. on  $sp^3$  hybridization

- A. All p-orbitals are involved      B. One s and 3 p-orbitals are involved  
C. one p-orbital is involved      D. four p-orbitals are involved

**Answer:** Option B

---

42. Geometry of simple molecule having  $sp^3$  hybrid orbital is

- A. Triangular      B. Tetrahedral  
C. Square planner      D. Linear

**Answer:** Option B

---

43. Geometry of molecule will be pyramidal if the outer post shell of the central atom has

- A. 3 bond pair one lone pair      B. 2 bond pair 2 lone pair  
C. 1 bond pair 3 lone pair      D. 3 lone pair 1 bond pair

**Answer:** Option A

---

44. Pi bonds are produced by overlapping of

- A. Un-hybrid orbitals      B. Hybrid orbitals  
C. Hybrid and un hybrid orbitals      D. atomic orbital and hybrid orbital

**Answer:** Option A

---

45. According to VESPR Model the geometry of molecule having 5 bond pair in outer most shell will be

- A. Triangular      B. Square planner  
C. Trigonal bipyramidal      D. Octahedral

**Answer:** Option c

- 
46. Molecular orbital which have higher energy than atomic orbitals is called
- A. Bonding molecular orbital                      B. Antibonding molecular orbital
- C. Hybrid orbital                                      D. Super atomic orbital

**Answer:** Option B

- 
47. Unpaired electron in a molecule gives \_\_\_\_\_ character.
- A. Ferromagnetic                                      B. Paramagnetic
- C. Diamagnetism                                      D. Both a & b

**Answer:** Option B

- 
48. Bond order for N<sub>2</sub> molecule is
- A. 2    B. 1
- C. 3    D. 4

**Answer:** Option c

- 
49. Product of charge and distance is called
- A. Pressure    B. Bond length
- C. Work    D. Dipole moment

**Answer:** Option D

- 
50. Unit of dipole moment is
- A. Debye    B. Poise
- C. Pascal    D. Newton

**Answer:** Option A