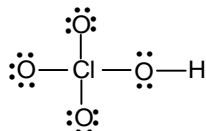


Dear student following is an Easy level [O●OOO] test paper. A score of 25 marks in 10 minutes would be a satisfactory performance: Q.No. 1 to 12 (+3, -1). (M.M. 36)

Single option correct

**Q.1** What is the formal charge on chlorine if the compound has this lewis structure?



- (A) 0 (B) +3 (C) +5 (D) +7

**Q.2** Which is the Lewis dot structure of carbon disulfide, CS<sub>2</sub>? In this molecule, the sulfur (S) atom has the same number of valence electrons as an oxygen atom.

- (A)  $\text{:}\ddot{\text{S}}\text{:C}::\ddot{\text{S}}\text{:}$  (B)  $\text{:}\ddot{\text{S}}::\text{C}::\ddot{\text{S}}\text{:}$   
(C)  $\text{:}\ddot{\text{S}}\text{:}\ddot{\text{C}}\text{:}\ddot{\text{S}}\text{:}$  (D) None of these

**Q.3** Which of the following types of hybridisation leads to two dimensional arrangement of bonds around the atoms?

- (A) sp (B) sp<sup>2</sup>  
(C) sp<sup>3</sup> (D) None

**Q.4** In which of the following atoms the number of valency electrons is not three

- (A) Al (B) B (C) Sc (D) Ge

**Q.5** In which of the following central atom has no formal charge?

- (A) N<sub>3</sub><sup>-</sup> (B) O<sub>3</sub> (C) NH<sub>3</sub> (D) NO<sub>2</sub>

**Q.6** Which of the following element show the capacity to form hybrid orbitals by using s, p and d orbital:

- (A) B (B) N (C) C (D) S

**Q.7** In which excited state iodine shows sp<sup>3</sup>d<sup>3</sup> hybridisation state:

- (A) First (B) Second  
(C) Third. (D) None

**Q.8** The pair having same steric number:

- (A) BF<sub>3</sub>, NF<sub>3</sub> (B) BF<sub>3</sub>, AlF<sub>3</sub>  
(C) BeF<sub>2</sub>, H<sub>2</sub>O (D) BCl<sub>3</sub>, PCl<sub>3</sub>

**Q.9** Keep the odd molecule out with respect to hybridisation of central atom:

- (A) SiH<sub>4</sub> (B) NCl<sub>3</sub>  
(C) BF<sub>4</sub><sup>-</sup> (D) BCl<sub>3</sub>

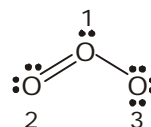
**Q.10** The number of shared electrons in x molecules of CS<sub>2</sub> is:

- (A) 2x (B) 4x (C) 6x (D) 8x.

**Q.11** What type of orbital-orbital overlap occurs between O – F bonds in OF<sub>2</sub>?

- (A) sp<sup>2</sup> – 2p (B) sp<sup>3</sup> – 2s  
(C) sp – 2p (D) sp<sup>3</sup> – 2p.

**Q.12** It has been seen that in O<sub>3</sub>, the central O atom is bonded to two other oxygen atoms as



Arrange oxygen atoms marked as 1, 2 and 3 in order of +1, 0, -1 formal charges respectively:

- (A) 1, 2, 3 (B) 1, 3, 2  
(C) 2, 1, 3 (D) 3, 2, 1

----- ✂ ----- ✂ -----

**CHEMISTRY IIT JEE (CLASS TEST - 1) (INORGANIC) ANSWER KEY M.M. 36**

Name : ..... Roll No. : .....

- |    | A                     | B                     | C                     | D                     |    | A                     | B                     | C                     | D                     |     | A                     | B                     | C                     | D                     |
|----|-----------------------|-----------------------|-----------------------|-----------------------|----|-----------------------|-----------------------|-----------------------|-----------------------|-----|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 5. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 9.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 6. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 10. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 7. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 11. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 8. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | 12. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |