

## JEE MAIN CHEMICAL BONDING AND MOLECULAR STRUCTURE — BOND PARAMETERS: BOND LENGTH, BOND ENERGY AND BOND ANGLE — PYQS

Max. Marks: 12

Questions: 3

### Section A (MCQ) — 3 questions

**Q.1** Given below are two statements :

**Statement-I:**  $F_2O < H_2O < Cl_2O$  is the correct trend in terms of bond angle.

**Statement-II:**  $SiF_4$ ,  $SnF_4$  and  $PbF_4$  are ionic in nature.

In the light of the above statements, choose the correct answer from the options given below :

[JEE Main 2026 (Online) 6th April Evening Shift]

- (1) Both Statement-I and Statement-II are true  
 (2) Both Statement-I and Statement-II are false  
 (3) Statement-I is true but Statement-II is false  
 (4) Statement-I is false but Statement-II is true

Scan or tap for the  
full solution



**Q.2** The covalent radii of atoms A and B are  $r_A$  and  $r_B$ , respectively. The covalent bond length and total length of AB molecule are respectively

[JEE Main 2026 (Online) 5th April Evening Shift]

- (1)  $(r_A + r_B)$ ,  $2(r_A + r_B)$       (2)  $\frac{1}{2}(r_A + r_B)$ ,  $(r_A + r_B)$   
 (3)  $(r_A + r_B)$ ,  $(r_A + r_B)$       (4)  $2(r_A + r_B)$ ,  $\frac{1}{2}(r_A + r_B)$

Scan or tap for the  
full solution



**Q.3** The correct increasing order of C–H(A), C–O(B), C=O(C) and C≡N(D) bonds in terms of covalent bond length is :

[JEE Main 2026 (Online) 21st January Evening Shift]

- (1)  $D < C < B < A$       (2)  $D < C < A < B$   
 (3)  $A < B < C < D$       (4)  $A < D < C < B$

Scan or tap for the  
full solution



### ANSWER KEY

| Ques. | 1 | 2 | 3 |  |  |  |  |  |  |  |  |  |
|-------|---|---|---|--|--|--|--|--|--|--|--|--|
| Ans.  | 3 | 1 | 4 |  |  |  |  |  |  |  |  |  |