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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

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

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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

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ANSWER KEY

Ques.	1	2	3								
Ans.	3	1	4								