

PYQSide

JEE MAIN CHEMICAL BONDING AND MOLECULAR STRUCTURE — LEWIS STRUCTURES, OCTET RULE AND COORDINATE BOND — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ)

Q.1 The pairs among A = $[\text{SO}_3^{2-}, \text{CO}_3^{2-}]$, B = $[\text{O}_2^{2-}, \text{F}_2]$, C = $[\text{CN}^-, \text{CO}]$, D = $[\text{NH}_3, \text{H}_3\text{O}^+]$ and E = $[\text{MnO}_4^{2-}, \text{CrO}_4^{2-}]$ that do not have similar Lewis dot structure are

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

- (1) A, B and E (2) A and E
(3) B, C and D (4) C and D

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Q.2 Given below are two statements :

Statement-I: The number of compounds among SO_2 , SO_3 , SF_4 , SF_6 and H_2S in which sulphur does not obey the Octet rule is 3.

Statement-II: Among $[\text{H}_2\text{O}, \text{ClF}_3, \text{SF}_4]$, $[\text{NH}_3, \text{BrF}_5, \text{SF}_4]$, $[\text{BrF}_5, \text{ClF}_3, \text{XeF}_4]$ and $[\text{XeF}_4, \text{ClF}_3, \text{H}_2\text{O}]$, the number of sets in which all the molecules have one lone pair of electrons on the central atom is 1.

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

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- (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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Section B (Numerical)

Q.3 According to Lewis theory, the total number of σ bond-pairs and lone pair of electrons around the central atom of XeO_6^{4-} ion is _____.

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ANSWER KEY

Section A (MCQ)

Ques.	1	2												
Ans.	2	4												

Section B (Numerical)

Ques.	3													
Ans.	6													