

PYQSide

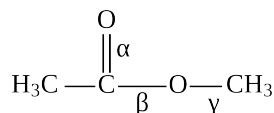
JEE MAIN ORGANIC CHEMISTRY – SOME BASIC PRINCIPLES AND TECHNIQUES — RESONANCE EFFECT — PYQS

Max. Marks: 20

Questions: 5

Section A (MCQ)

- Q.1** Shown below is the structure of methyl acetate with three different α , β and γ carbon - oxygen bonds.



The correct order of bond lengths of these bonds is :

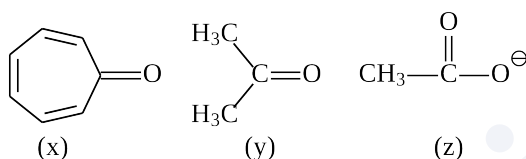
[JEE Main 2026 (Online) 6th April Evening Shift]

- (1) $\alpha > \beta > \gamma$ (2) $\alpha < \beta < \gamma$
 (3) $\alpha = \beta = \gamma$ (4) $\alpha < \beta = \gamma$

Scan or tap for the full solution



- Q.2** Consider the following molecules/species :



The correct order of carbon-oxygen double bond length is :

[JEE Main 2026 (Online) 4th April Evening Shift]

- (1) $x > y > z$ (2) $y > z > x$
 (3) $z > x > y$ (4) $x > z > y$

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- Q.3** Given below are two statements :

Statement-I: In $\text{O}_2\text{N}-\text{C}_6\text{H}_4-\text{CH}^+-\text{C}_6\text{H}_4-\text{OCH}_3$, the carbocation is stabilised by +R effect of $-\text{OCH}_3$ group.

Statement-II: In $\text{O}_2\text{N}-\text{C}_6\text{H}_4-\text{CH}^--\text{C}_6\text{H}_4-\text{OCH}_3$, the carbanion is stabilised by -R effect of $-\text{NO}_2$ group.

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

[JEE Main 2026 (Online) 2nd April Evening Shift]

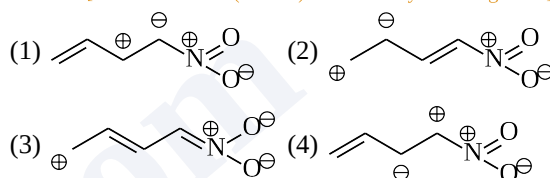
- (1) Both Statement-I and Statement-II are true
 (2) Both Statement-I and Statement-II are false
 (3) Statement-I is true but Statement-II is false
 (4) Statement-I is false but Statement-II is true

Scan or tap for the full solution



- Q.4** From the following, the least stable structure is :

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



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- Q.5** Given below are two statements.

Statement-I: The dipole moment of $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}=\text{O}$ is greater than $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{CH}=\text{O}$

Statement-II: C_1-C_2 bond length of $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}=\text{O}$ is greater than C_1-C_2 bond length of $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{CH}=\text{O}$

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

[JEE Main 2025 (Online) 4th April Morning Shift]

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

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5						
Ans.	2	4	1	4	2						