

PYQSide

JEE MAIN HALOALKANES AND HALOARENES — MECHANISM AND REACTIVITY OF SN1 AND SN2 — PYQS

Max. Marks: 28

Questions: 7

Section A (MCQ)

Q.1 Given below are two statements :

Statement-I: Benzyl chloride reacts faster in S_N1 mechanism than ethyl chloride.

Statement-II: Ethyl carbocation intermediate is less stabilized by hyperconjugation than benzyl carbocation by resonance.

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

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

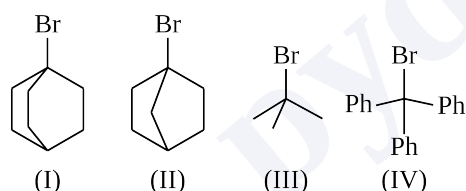
- (1) Both Statement-I and Statement-II are true
- (2) Both Statement-I and Statement-II are false
- (3) Statement-I is true but Statement-II is false
- (4) Statement-I is false but Statement-II is true

Scan or tap for the full solution

Q.2 The correct order of the rate of reaction of the following reactants with nucleophile by S_N1 mechanism is :

(Given : Structures I and II are rigid)

[JEE Main 2026 (Online) 22nd January Morning Shift]



- (1) $I < II < III < IV$
- (2) $II < I < III < IV$
- (3) $III < I < II < IV$
- (4) $IV < III < II < I$

Scan or tap for the full solution

Q.3 The correct order of reactivity of CH_3Br in methanol with the following nucleophiles is F^- , I^- , $C_2H_5O^-$ and $C_6H_5O^-$

[JEE Main 2026 (Online) 22nd January Morning Shift]

- (1) $I^- > C_2H_5O^- > C_6H_5O^- > F^-$
- (2) $I^- > F^- > C_6H_5O^- > C_2H_5O^-$
- (3) $I^- > C_6H_5O^- > F^- > C_2H_5O^-$
- (4) $I^- > C_2H_5O^- > F^- > C_6H_5O^-$

Scan or tap for the full solution

Q.4 The correct order of the rate of the reaction for the following reaction with respect to nucleophiles is : $CH_3Br + Nu^- \longrightarrow CH_3Nu + Br^-$

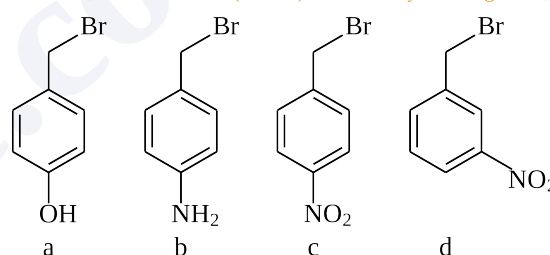
[JEE Main 2026 (Online) 21st January Evening Shift]

- (1) $ClO_4^- > CH_3COO^- > OH^- > PhO^-$
- (2) $OH^- > PhO^- > CH_3COO^- > ClO_4^-$
- (3) $CH_3COO^- > PhO^- > OH^- > ClO_4^-$
- (4) $PhO^- > OH^- > CH_3COO^- > ClO_4^-$

Scan or tap for the full solution

Q.5 The correct order of reactivity of the following benzyl halides towards reaction with KCN is :

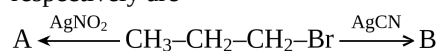
[JEE Main 2026 (Online) 21st January Evening Shift]



- (1) $a > b > c > d$
- (2) $b > a > d > c$
- (3) $b > a > c > d$
- (4) $a > b > d > c$

Scan or tap for the full solution

Q.6 The products A and B in the following reactions, respectively are

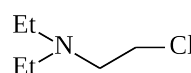


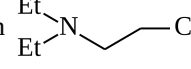
[JEE Main 2025 (Online) 28th January Morning Shift]

- (1) $CH_3-CH_2-CH_2-ONO$, $CH_3-CH_2-CH_2-CN$
- (2) $CH_3-CH_2-CH_2-NO_2$, $CH_3-CH_2-CH_2-CN$
- (3) $CH_3-CH_2-CH_2-ONO$, $CH_3-CH_2-CH_2-NC$
- (4) $CH_3-CH_2-CH_2-NO_2$, $CH_3-CH_2-CH_2-NC$

Scan or tap for the full solution

Q.7 Given below are two statements :

Statement-I:  will undergo alkaline hydrolysis at a faster rate than

 **Statement-II:** In , intramolecular substitution takes place first by involving lone pair

of electrons on nitrogen.

In the light of the above statements, choose the most appropriate answer from the options given below

[JEE Main 2025 (Online) 28th January Morning Shift]

- (1) Both Statement-I and Statement-II are correct
- (2) Statement-I is incorrect but Statement-II is correct
- (3) Both Statement-I and Statement-II are incorrect
- (4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7				
Ans.	1	2	1	2	2	4	1				