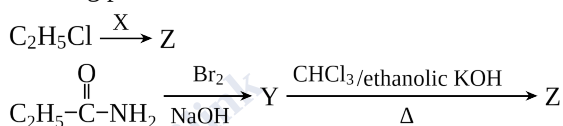


NEET HALOALKANES AND HALOARENES — MECHANISM AND REACTIVITY OF SN1 AND SN2 — PYQS

Max. Marks: 48
Questions: 12

Section A (MCQ) — 12 questions

Q.1 The following two reactions give the same foul smelling product Z.



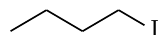
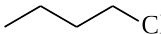
X and Z, respectively, are : [NEET (UG) 2026]

- (1) X = AgCN; Z = C₂H₅CN
- (2) X = AgCN; Z = C₂H₅NC
- (3) X = KCN; Z = C₂H₅CN
- (4) X = KCN; Z = C₂H₅NC

Scan or tap for the full solution



Q.2 Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A):  I undergoes S_N2 reaction faster than  Cl

Reason (R): Iodine is a better leaving group because of its large size.

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

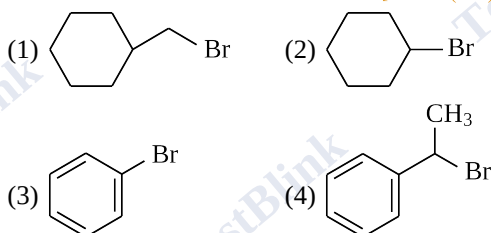
[NEET (UG) 2025]

- (1) A is true but R is false
- (2) A is false but R is true
- (3) Both A and R are true and R is the correct explanation of A
- (4) Both A and R are true but R is not the correct explanation of A

Scan or tap for the full solution



Q.3 The compound that will undergo S_N1 reaction with the fastest rate is [NEET (UG) 2024]



Scan or tap for the full solution



Q.4 Predict the order of reactivity of the following four isomers towards S_N2 reaction.

- (I) CH₃CH₂CH₂CH₂Cl
- (II) CH₃CH₂CH(Cl)CH₃
- (III) (CH₃)₂CHCH₂Cl
- (IV) (CH₃)₃CCl

[NEET (UG) 2022 (Phase 2)]

- (1) (IV) > (II) > (III) > (I)
- (2) (IV) > (III) > (II) > (I)
- (3) (I) > (II) > (III) > (IV)
- (4) (I) > (III) > (II) > (IV)

Scan or tap for the full solution



Q.5 Consider the reaction,
CH₃CH₂CH₂Br + NaCN → CH₃CH₂CH₂CN + NaBr
The reaction will be the fastest in

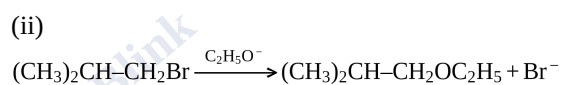
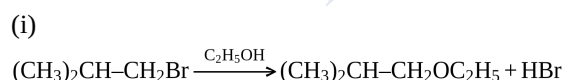
[NEET 2016 (Phase 2)]

- (1) ethanol
- (2) methanol
- (3) N,N-dimethylformamide (DMF)
- (4) water

Scan or tap for the full solution



Q.6 Consider the reactions.



The mechanisms of reactions (i) and (ii) are respectively

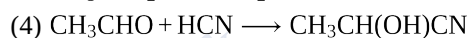
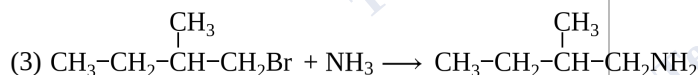
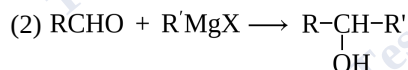
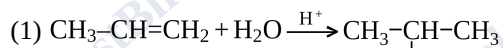
[AIPMT 2011 (Mains)]

- | | |
|---|---|
| (1) S _N 1 and S _N 2 | (2) S _N 1 and S _N 1 |
| (3) S _N 2 and S _N 2 | (4) S _N 2 and S _N 1 |

Scan or tap for the full solution



Q.7 Which one is a nucleophilic substitution reaction among the following ? [AIPMT 2011 (Prelims)]



Scan or tap for the full solution



Q.8 Which one is most reactive towards S_N1 reaction?

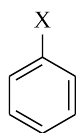
[AIPMT 2010 (Prelims)]

- (1) C₆H₅CH(C₆H₅)Br
- (2) C₆H₅CH(CH₃)Br
- (3) C₆H₅C(CH₃)(C₆H₅)Br
- (4) C₆H₅CH₂Br

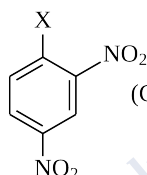
Scan or tap for the full solution



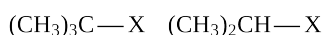
Q.9 The correct order of increasing reactivity of



I



II



III

IV

C-X bond towards nucleophile in the following compounds is

[AIPMT 2010 (Prelims)]

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

Scan or tap for the full solution



Q.10 Which of the following reactions is an example of nucleophilic substitution reaction?

[AIPMT 2009]

- (1) $2\text{RX} + 2\text{Na} \longrightarrow \text{R-R} + 2\text{NaX}$
- (2) $\text{RX} + \text{H}_2 \longrightarrow \text{RH} + \text{HX}$
- (3) $\text{RX} + \text{Mg} \longrightarrow \text{RMgX}$
- (4) $\text{RX} + \text{KOH} \longrightarrow \text{ROH} + \text{KX}$

Scan or tap for the full solution

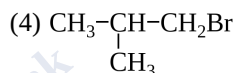
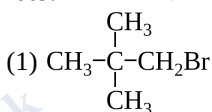


Q.11 In an S_N2 substitution reaction of the type



which one of the following has the highest relative rate?

[AIPMT 2008]



Scan or tap for the full solution



Q.12 Which of the following undergoes nucleophilic substitution exclusively by S_N1 mechanism?

[AIPMT 2005]

- (1) Ethyl chloride
- (2) Isopropyl chloride
- (3) Chlorobenzene
- (4) Benzyl chloride

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	2	3	4	4	3	1	3	3	1	4	2
Ques.	12										
Ans.	4										