

NEET HYDROCARBONS — CHEMICAL PROPERTIES OF ALKENES — PYQS

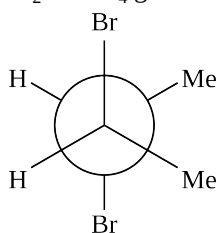
Max. Marks: 72

Questions: 18

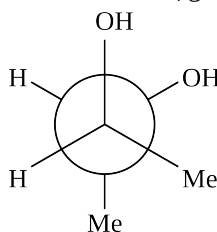
Section A (MCQ) — 18 questions

Q.1 Given below are two statements :

Statement-I: trans-But-2-ene upon treatment with Br_2 in CCl_4 gives the following product.



Statement-II: cis-But-2-ene upon treatment with alkaline KMnO_4 gives the following product.



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

[RE-NEET (UG) 2026]

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

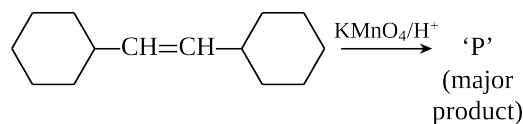
Scan or tap for the full solution 

Q.2 Which one of the following compounds does not decolourize bromine water? [NEET (UG) 2025]

- (1)  $\text{CH}=\text{CH}_2$
- (2)  NH_2
- (3) 
- (4)  OH

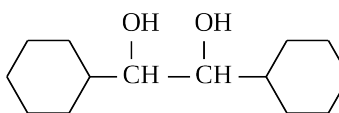
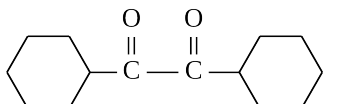
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Q.3 For the given reaction:



'P' is

[NEET (UG) 2024]

- (1)  CHO
- (2)  COOH
- (3) 
- (4) 

Scan or tap for the full solution 

Q.4 Baeyer's reagent is : [RE-NEET (UG) 2024]

- (1) Acidic potassium permanganate solution
- (2) Acidic potassium dichromate solution
- (3) Cold, dilute, aqueous solution of potassium permanganate
- (4) Hot, concentrated solution of potassium permanganate

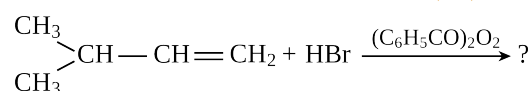
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Q.5 Compound X on reaction with O_3 followed by $\text{Zn}/\text{H}_2\text{O}$ gives formaldehyde and 2-methyl propanal as products. The compound X is [NEET (UG) 2022]

- (1) 3-Methylbut-1-ene
- (2) 2-Methylbut-1-ene
- (3) 2-Methylbut-2-ene
- (4) Pent-2-ene

Scan or tap for the full solution 

Q.6 The major product of the following chemical reaction is : [NEET (UG) 2021]



- (1) $\begin{array}{c} \text{CH}_3 \\ \diagup \\ \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{Br} \\ \diagdown \\ \text{CH}_3 \end{array}$
- (2) $\begin{array}{c} \text{CH}_3 \\ \diagup \\ \text{CH} - \text{CH}_2 - \text{CH}_2 - \text{O} - \text{COC}_6\text{H}_5 \\ \diagdown \\ \text{CH}_3 \end{array}$
- (3) $\begin{array}{c} \text{CH}_3 \\ \diagup \\ \text{CH} - \text{CH} - \text{CH}_3 \\ \diagdown \quad | \\ \text{CH}_3 \quad \text{Br} \end{array}$
- (4) $\begin{array}{c} \text{CH}_3 \\ \diagup \\ \text{CBr} - \text{CH}_2 - \text{CH}_3 \\ \diagdown \\ \text{CH}_3 \end{array}$

Scan or tap for the
full solution



Q.7 An alkene on ozonolysis gives methanal as one of the products, Its structure is : [NEET (UG) 2020]

- (1) $\begin{array}{c} \text{CH}_2 - \text{CH}_2 - \text{CH}_3 \\ | \\ \text{Cyclohexene} \end{array}$ (2) $\begin{array}{c} \text{CH}_2 - \text{CH} = \text{CH}_2 \\ | \\ \text{Cyclohexene} \end{array}$
- (3) $\begin{array}{c} \text{CH}_2\text{CH}_2\text{CH}_3 \\ | \\ \text{Cyclohexene} \end{array}$ (4) $\begin{array}{c} \text{CH} = \text{CH} - \text{CH}_3 \\ | \\ \text{Cyclohexene} \end{array}$

Scan or tap for the
full solution



Q.8 An alkene "A" on reaction with O_3 and $\text{Zn} + \text{H}_2\text{O}$ gives propanone and ethanal in equimolar ratio. Addition of HCl to alkene "A" gives "B" as the major product. The structure of product "B" is :

[NEET (UG) 2019]

- (1) $\begin{array}{c} \text{CH}_3 \\ | \\ \text{H}_3\text{C} - \text{CH}_2 - \text{C} - \text{CH}_3 \\ | \\ \text{Cl} \end{array}$ (2) $\begin{array}{c} \text{CH}_3 \\ | \\ \text{H}_3\text{C} - \text{CH} - \text{CH} \\ | \quad | \\ \text{Cl} \quad \text{CH}_3 \end{array}$
- (3) $\begin{array}{c} \text{CH}_3 \\ | \\ \text{Cl} - \text{CH}_2 - \text{CH}_2 - \text{CH} \\ | \\ \text{CH}_3 \end{array}$ (4) $\begin{array}{c} \text{CH}_2\text{Cl} \\ | \\ \text{H}_3\text{C} - \text{CH}_2 - \text{CH} - \text{CH}_3 \end{array}$

Scan or tap for the
full solution



Q.9 The compound that will react most readily with gaseous bromine has the formula

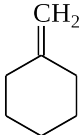
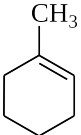
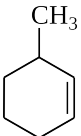
[NEET 2016 (Phase 2)]

- (1) C_3H_6 (2) C_2H_2 (3) C_4H_{10} (4) C_2H_4

Scan or tap for the
full solution



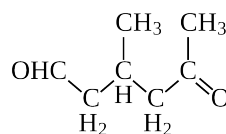
Q.10 In the reaction with HCl , an alkene reacts in accordance with the Markovnikov's rule to give a product 1-chloro-1-methylcyclohexane. The possible alkene is [AIPMT 2015]

- (1)  (A) (2)  (B)
- (3) (A) and (B) (4) 

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full solution

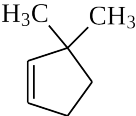
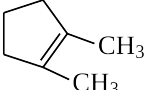
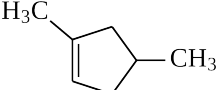
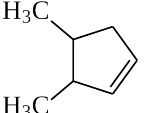


Q.11 A single compound of the structure,



is obtainable from ozonolysis of which of the following cyclic compounds?

[AIPMT 2015 (Cancelled)]

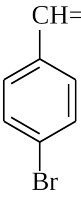
- (1)  (2) 
- (3)  (4) 

Scan or tap for the
full solution



Q.12 The reaction of $\text{C}_6\text{H}_5\text{CH}=\text{CHCH}_3$ with HBr produces

[AIPMT 2015 (Cancelled)]

- (1) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{CH}_2\text{Br}$ (2) 
- (3) $\text{C}_6\text{H}_5\text{CH}(\text{Br})\text{CH}_2\text{CH}_3$ (4) $\text{C}_6\text{H}_5\text{CH}_2\text{CH}(\text{Br})\text{CH}_3$

Scan or tap for the
full solution



Q.13 $\text{H}_3\text{C}-\underset{\text{CH}_3}{\text{CH}}-\text{CH}=\text{CH}_2 + \text{HBr} \rightarrow$

A (predominantly) is

[AIPMT 2008]

- (1) $\text{CH}_3-\underset{\text{Br}}{\text{CH}}-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_3$
 (2) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\underset{\text{Br}}{\text{CH}}-\text{CH}_3$
 (3) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_2-\text{CH}_2\text{Br}$
 (4) $\text{CH}_3-\underset{\text{CH}_3}{\underset{\text{Br}}{\text{C}}}-\text{CH}_2\text{CH}_3$

Scan or tap for the
full solution



Q.14 Which of the compound with molecular formula C_5H_{10} yields acetone on ozonolysis? [AIPMT 2007]

- (1) 3-Methyl-1-butene (2) Cyclopentane
 (3) 2-Methyl-1-butene (4) 2-Methyl-2-butene

Scan or tap for the
full solution



Q.15 Which one of the following alkenes will react faster with H_2 under catalytic hydrogenation conditions ?

[AIPMT 2005]

- (1) $\begin{array}{c} \text{R} \quad \text{R} \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{H} \quad \text{H} \end{array}$ (2) $\begin{array}{c} \text{R} \quad \text{H} \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{R} \quad \text{H} \end{array}$
 (3) $\begin{array}{c} \text{R} \quad \text{R} \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{R} \quad \text{H} \end{array}$ (4) $\begin{array}{c} \text{R} \quad \text{R} \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{R} \quad \text{R} \end{array}$

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full solution



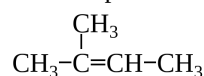
Q.16 Reaction of HBr with propene in the presence of peroxide gives [AIPMT 2004]

- (1) isopropyl bromide (2) 3-bromopropane
 (3) allyl bromide (4) n-propyl bromide

Scan or tap for the
full solution



Q.17 The compound



on reaction with NaIO_4 in the presence of KMnO_4 gives [AIPMT 2003]

- (1) CH_3COCH_3
 (2) $\text{CH}_3\text{COCH}_3 + \text{CH}_3\text{COOH}$
 (3) $\text{CH}_3\text{COCH}_3 + \text{CH}_3\text{CHO}$
 (4) $\text{CH}_3\text{CHO} + \text{CO}_2$

Scan or tap for the
full solution



Q.18 Which alkene on ozonolysis gives $\text{CH}_3\text{CH}_2\text{CHO}$ and CH_3COCH_3 ? [AIPMT 2001]

- (1) $\text{CH}_3\text{CH}_2\text{CH}=\text{C} \begin{array}{l} \diagup \text{CH}_3 \\ \diagdown \text{CH}_3 \end{array}$
 (2) $\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_2\text{CH}_3$
 (3) $\text{CH}_3\text{CH}_2\text{CH}=\text{CHCH}_3$
 (4) $\begin{array}{c} \text{CH}_3-\text{C}=\text{CHCH}_3 \\ | \\ \text{CH}_3 \end{array}$

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	1	3	2	3	1	1	2	1	1	3	3
Ques.	12	13	14	15	16	17	18				
Ans.	3	4	4	1	4	2	1				