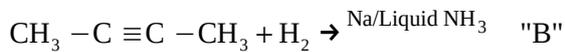
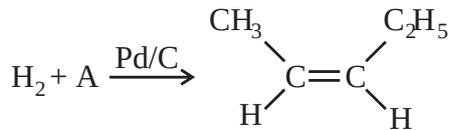
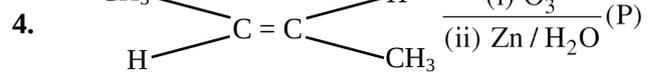
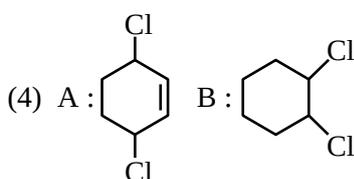
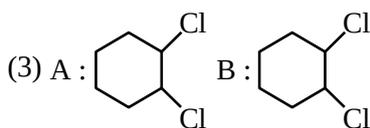
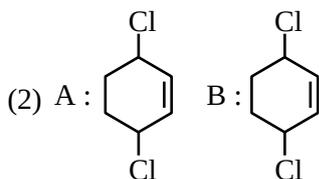
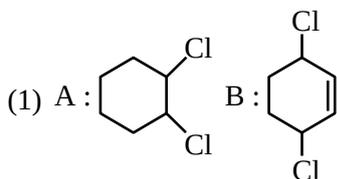
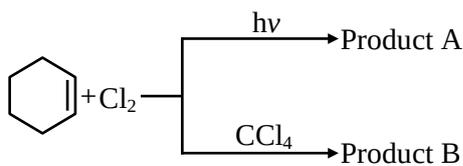


HYDROCARBON

1. In the given reactions identify A and B.

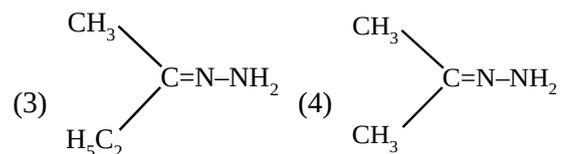
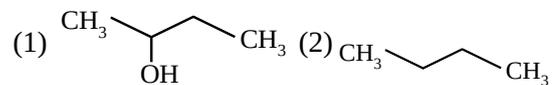
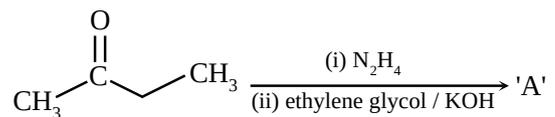


- (1) A : 2-Pentyne B : trans - 2 - butene
 (2) A : n - Pentane B : trans - 2 - butene
 (3) A : 2 - Pentyne B : Cis - 2 - butene
 (4) A : n - Pentane B : Cis - 2 - butane
2. Number of alkanes obtained on electrolysis of a mixture of CH_3COONa and C_2H_5COONa is _____.
3. Identify product A and product B :

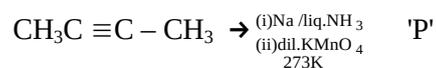


Consider the given reaction. The total number of oxygen atoms present per molecule of the product (P) is _____.

5. Identify 'A' in the following reaction :

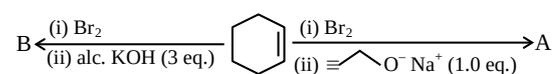


6. The number of moles of methane required to produce 11g $CO_2(g)$ after complete combustion is: (Given molar mass of methane in g mol⁻¹: 16)
- (1) 0.75 (2) 0.25
 (3) 0.35 (4) 0.5
7. The major product of the following reaction is P.



Number of oxygen atoms present in product 'P' is _____ (nearest integer).

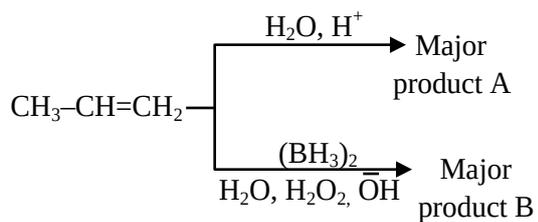
8. The major products from the following reaction sequence are product A and product B.



The total sum of π electrons in product A and product B are _____ (nearest integer)

HYDROCARBON

9. Identify the product A and product B in the following set of reactions.



(1) A- $\text{CH}_3\text{CH}_2\text{CH}_2\text{-OH}$, B- $\text{CH}_3\text{CH}_2\text{CH}_2\text{-OH}$

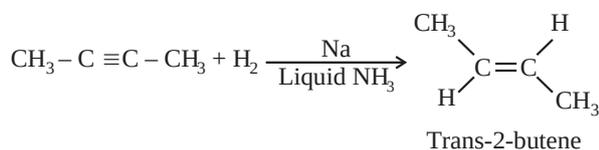
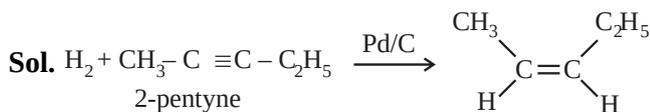
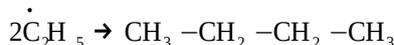
(2) A- $\text{CH}_3\text{CH}_2\text{CH}_2\text{-OH}$, B- $\text{CH}_3\underset{\text{OH}}{\text{CH}}\text{-CH}_3$

(3) A- $\text{CH}_3\underset{\text{OH}}{\text{CH}}\text{-CH}_3$, B- $\text{CH}_3\text{CH}_2\text{CH}_2\text{-OH}$

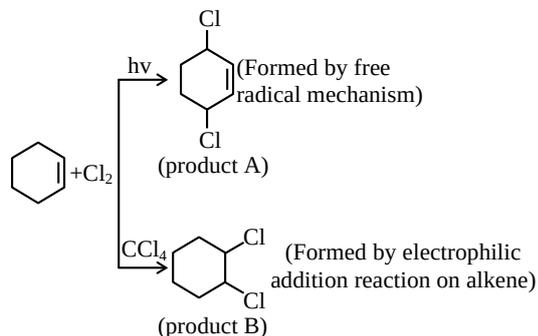
(4) A- $\text{CH}_3\text{CH}_2\text{CH}_3$, B- $\text{CH}_3\text{CH}_2\text{CH}_3$

10. The **incorrect** statement regarding ethyne is

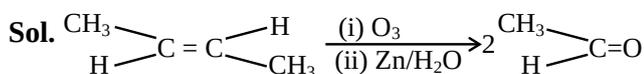
- (1) The C-C bonds in ethyne is shorter than that in ethene
- (2) Both carbons are sp hybridised
- (3) Ethyne is linear
- (4) The carbon-carbon bonds in ethyne is weaker than that in ethane

SOLUTIONS
1. Ans. (1)

2. Ans. (3)

3. Ans. (4)

Sol.

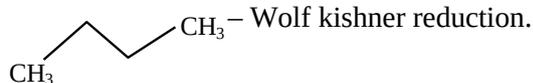
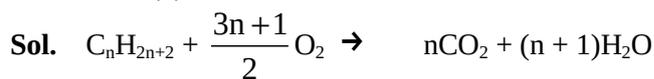
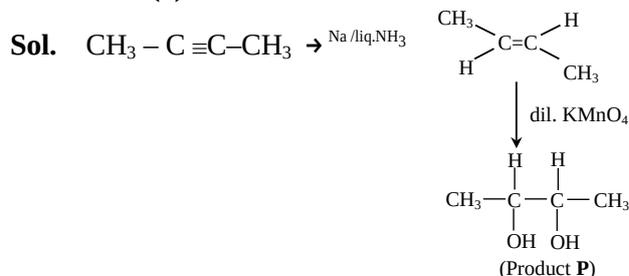
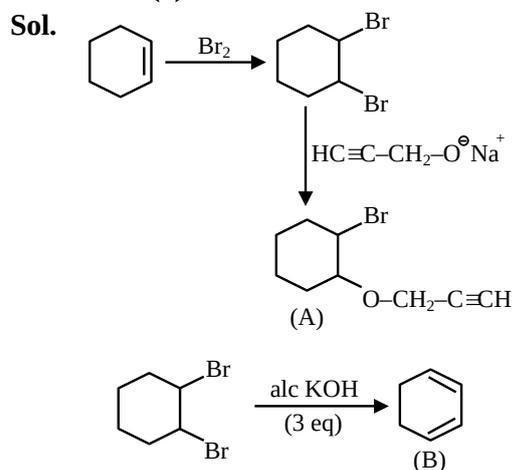


Hence correct Ans. (4)

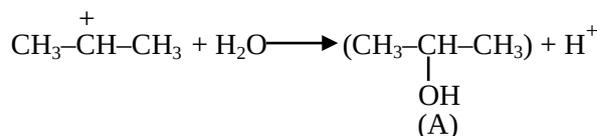
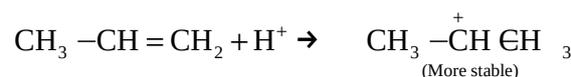
4. Ans. (1)


Hence total number of oxygen atom present per

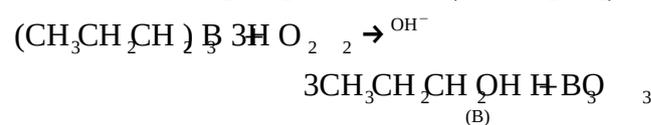
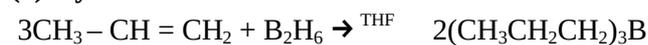
molecule $CH_3-C(=O)-H$ is 1.

5. Ans. (2)

6. Ans. (2)

7. Ans. (2)

8. Ans. (8)

9. Ans. (3)

Sol. (1) Hydration Reaction :



(2) Hydroboration Oxidation Reaction :


10. Ans. (4)

Sol. The carbon-carbon bonds in ethyne is stronger than that in ethene.

$(H-C \equiv C-H)$ Ethyne is linear and carbon atoms are sp hybridised.