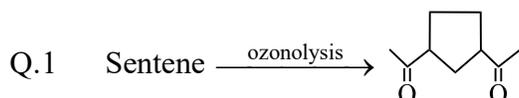
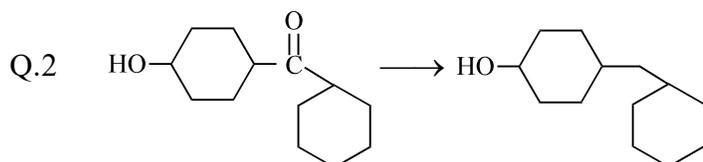


Single correct :

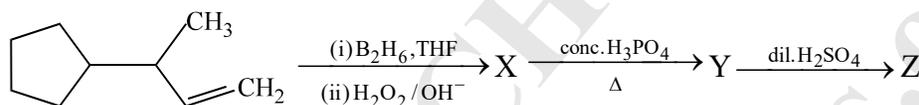
Which is the correct structure of Sentene



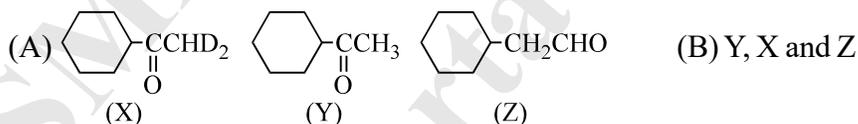
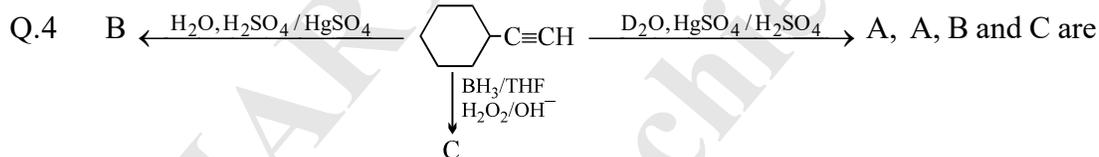
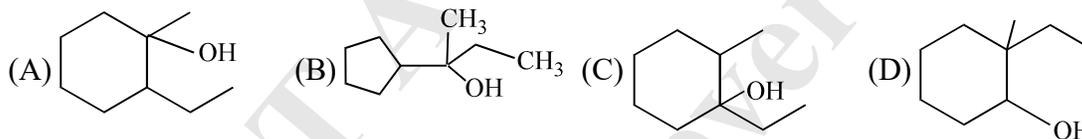
The above reduction can be best carried out by

- (A) Clemmenson reduction (B) Wolf-Kishner reduction (C) NaBH_4 (D) LiAlH_4

Q.3 Identify the final product of given reaction



Z is :

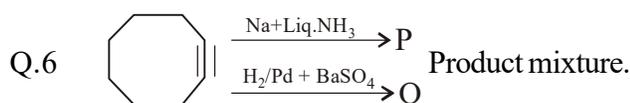


(C) Y in all cases

(D) Z in all cases

Q.5 Hex-2-yne and Hex-3-yne can be differentiated by

- (A) Tollen's reagent (B) Alc. KOH / Δ followed by a Tollen's reagent
(C) $\text{Cu}_2\text{Cl}_2 + \text{NH}_4\text{OH}$ (D) NaNH_2/Δ followed by $\text{Cu}_2\text{Cl}_2 + \text{NH}_4\text{OH}$



(A) P = Chiral

Q = Chiral

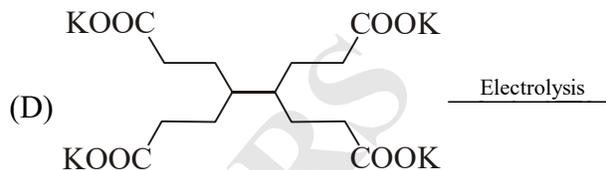
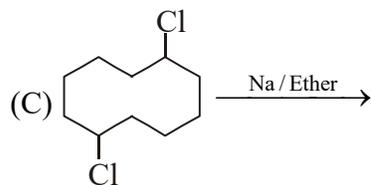
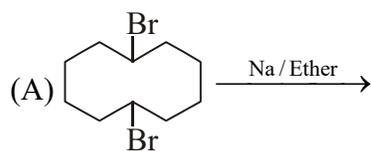
(B) P = Chiral Q = Achiral

(C) P = Achiral

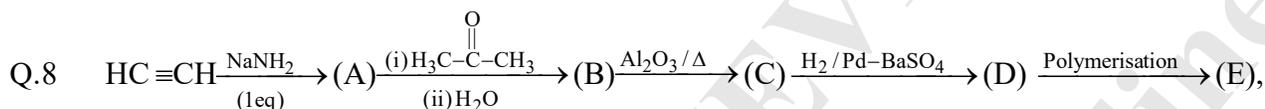
Q = Chiral

(D) P = Achiral Q = Achiral

Q.7 Which of the following reaction can not produce Decalin as one of the product?

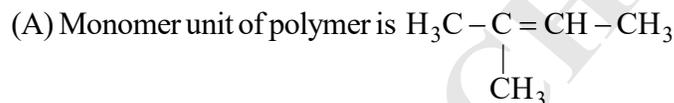


More than one may be correct

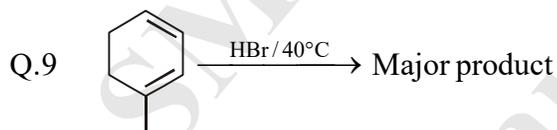
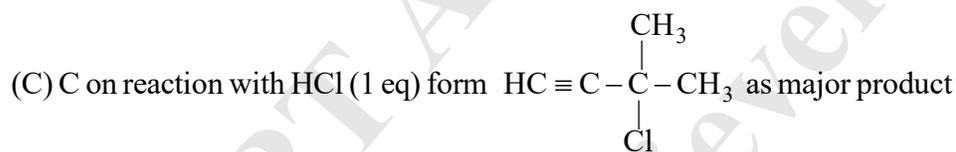


Polymer

Which statement is / are not correct about formed polymer



(B) Polymerization process follows 1,2-addition mechanism



Which statement(s) is / are incorrect?

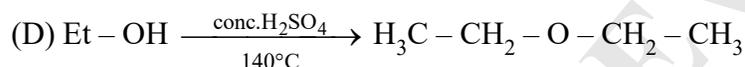
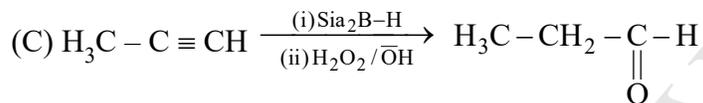
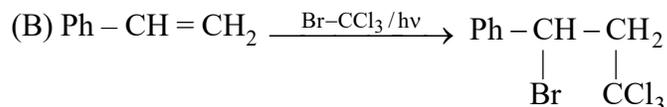
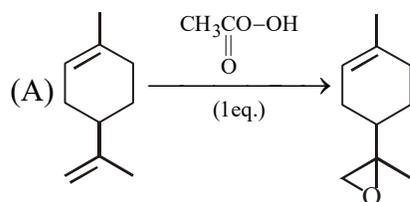
(A) Major product is TCP.

(B) TCP always forms by 1,4 addition

(C) KCP forms more rapidly and generally form as major product at very low temperature.

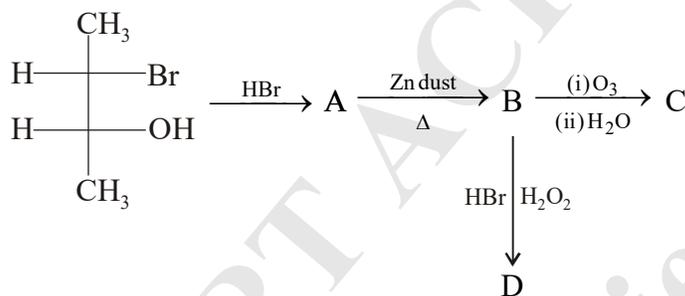
(D) Major product form by 1,2 addition.

Q.10 Which of the following reaction represent correct major product?



Comprehension :

Paragraph for Question no. 11 to 13



Q.11 B is



Q.12 'D' can be prepared by

- (A) Reaction of but-1-ene with HBr
 (B) Reaction of silver salt of butanoic acid with $\text{Br}_2/\text{CCl}_4/\Delta$
 (C) Reaction of but-1-ene with NBS
 (D) Reaction of Butan-2-ol with NaBr

Q.13 Which statement is correct?

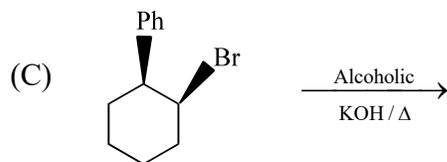
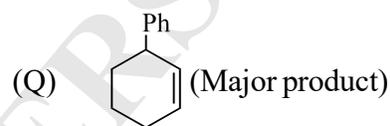
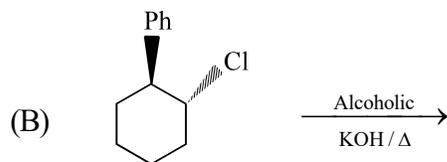
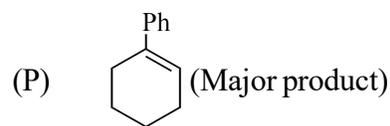
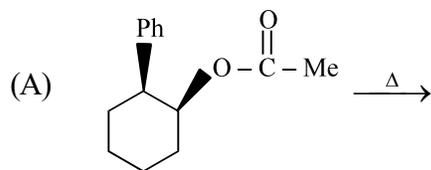
- (A) For reaction $[\text{B} \rightarrow \text{C}]$ if Zn is used during hydrolysis then carboxylic acid will form.
 (B) For reaction $[\text{A} \rightarrow \text{B}]$ mechanism of reaction is E_1 .
 (C) NaI / acetone also can be used for reaction $[\text{A} \rightarrow \text{B}]$
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Match the column :

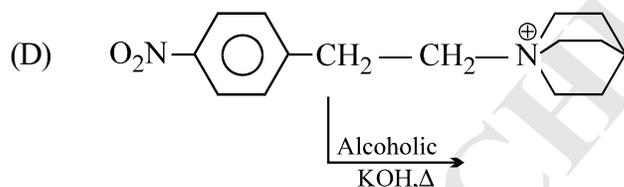
Q.14

Column I

Column II

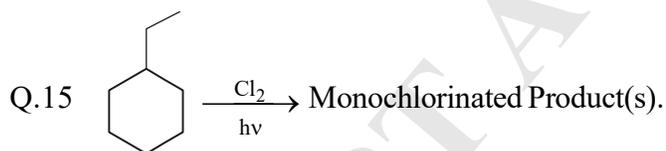


(R) Majority of the molecule will react by E₂ reaction



(S) Majority of the molecule will react by E₁CB

Subjective :

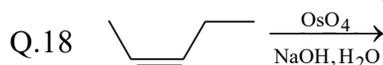


Number of product(s).



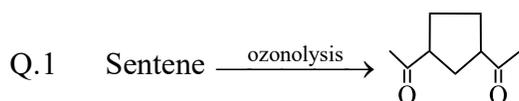
Theoretically how many mono bromo allylic substitution products are formed when the above compound is treated with NBS?

Q.17 How many alkene on catalytic reduction will produce

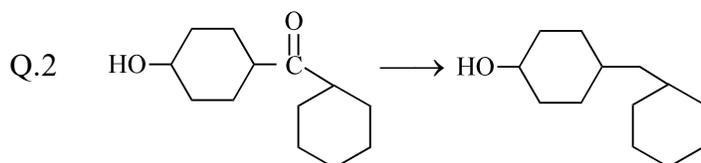


- Number of organic product formed during this reaction.
- Number of stereoisomers possible for major organic product of this reaction are.
- Oxidation state of Os before reaction.
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Write answer of part (a), (b), (c) & (d) in the same order and present the four digit number as answer in OMR sheet. For example : If all these answer are 9 then fill 9999 in OMR sheet.

Single correct :

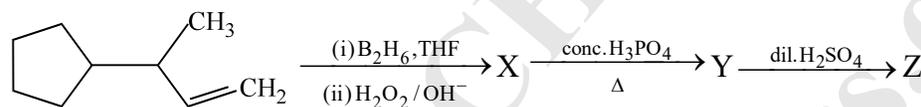
Which is the correct structure of Sentene



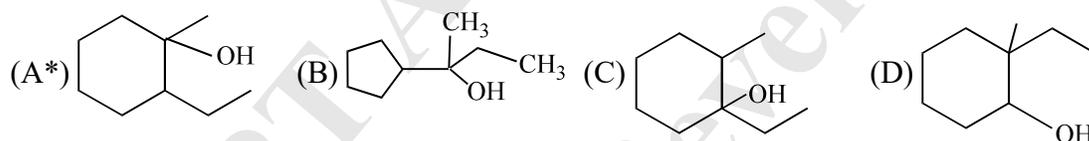
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Q.3 Identify the final product of given reaction



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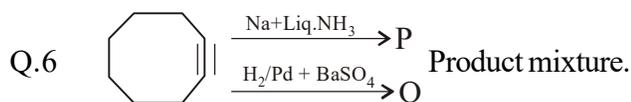


(C) Y in all cases

(D) Z in all cases

Q.5 Hex-2-yne and Hex-3-yne can be differentiated by

- (A) Tollen's reagent (B) Alc. KOH / Δ followed by a Tollen's reagent
(C) $\text{Cu}_2\text{Cl}_2 + \text{NH}_4\text{OH}$ (D*) NaNH_2/Δ followed by $\text{Cu}_2\text{Cl}_2 + \text{NH}_4\text{OH}$



(A) P = Chiral

Q = Chiral

(B*) P = Chiral

Q = Achiral

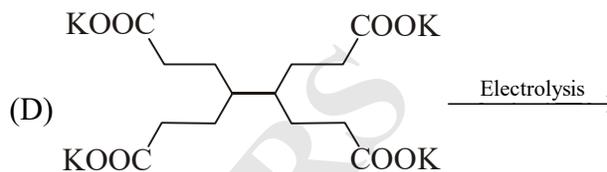
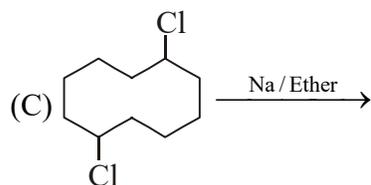
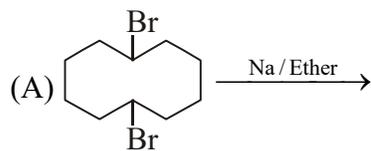
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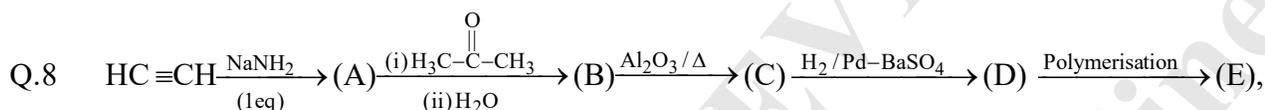
(D) P = Achiral

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Q.7 Which of the following reaction can not produce Decalin as one of the product?



More than one may be correct



Polymer

Which statement is / are not correct about formed polymer

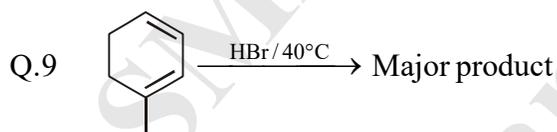
(A*) Monomer unit of polymer is $\text{H}_3\text{C}-\text{C}=\text{CH}-\text{CH}_3$



(B*) Polymerization process follows 1,2-addition mechanism

(C*) C on reaction with HCl (1 eq) form $\text{HC} \equiv \text{C}-\overset{\text{CH}_3}{\underset{\text{Cl}}{\text{C}}}-\text{CH}_3$ as major product

(D) Ozonolysis of D gives $\text{CH}_2=\text{O}$ and $\text{H}_3\text{C}-\overset{\text{O}}{\parallel}{\text{C}}-\overset{\text{O}}{\parallel}{\text{C}}-\text{H}$



Which statement(s) is / are incorrect?

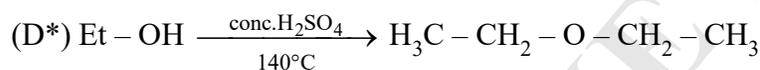
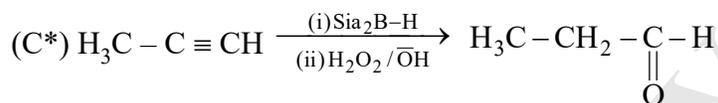
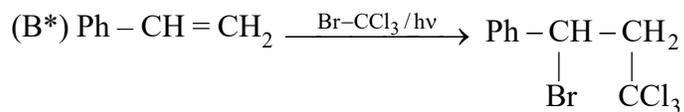
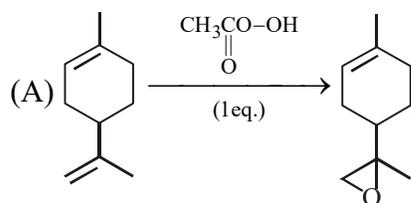
(A) Major product is TCP.

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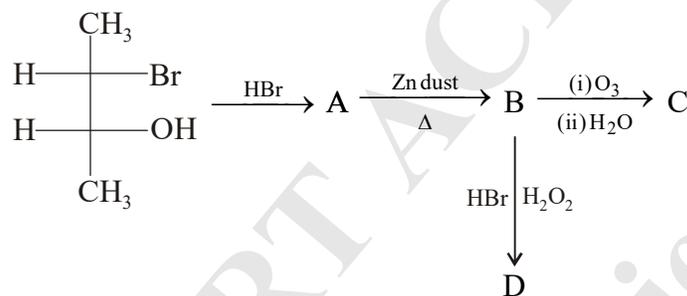
(D) Major product form by 1,2 addition.

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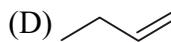
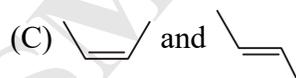


Comprehension :

Paragraph for Question no. 11 to 13



Q.11 B is



Q.12 'D' can be prepared by

- (A*) Reaction of but-1-ene with HBr
 (B) Reaction of silver salt of butanoic acid with $\text{Br}_2/\text{CCl}_4/\Delta$
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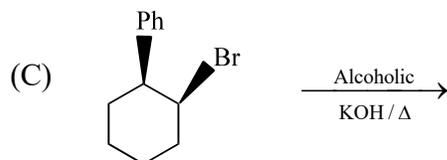
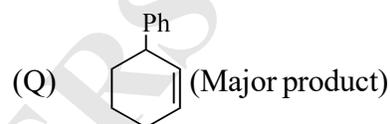
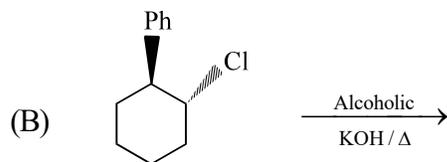
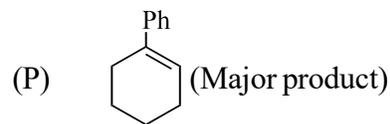
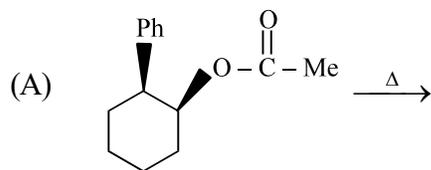
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Match the column :

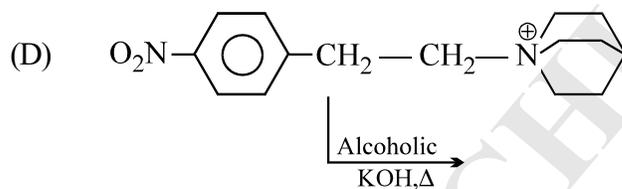
Q.14

Column I

Column II



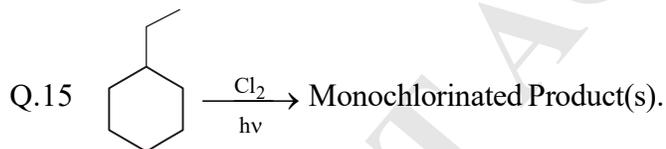
(R) Majority of the molecule will react by E₂ reaction



(S) Majority of the molecule will react by E₁CB

[Ans. (A) Q, (B) Q, R (C) P,R (D) S]

Subjective :



Number of product(s).

[Ans. 14]



Theoretically how many mono bromo allylic substitution products are formed when the above compound is treated with NBS?

[Ans. 3]

Q.17 How many alkene on catalytic reduction will produce



[Ans.5]



- Number of organic product formed during this reaction.
- Number of stereoisomers possible for major organic product of this reaction are.
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Write answer of part (a), (b), (c) & (d) in the same order and present the four digit number as answer in OMR sheet. For example : If all these answer are 9 then fill 9999 in OMR sheet.

[Ans.2486]