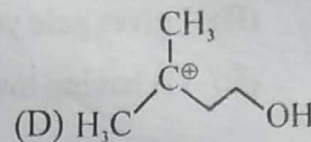
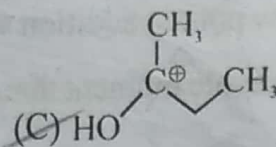
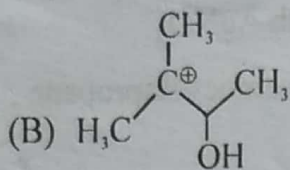
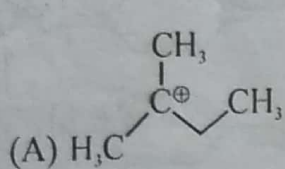
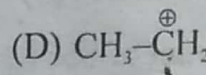
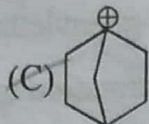
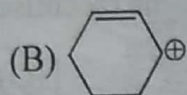
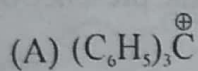


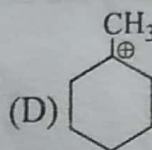
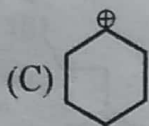
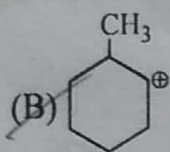
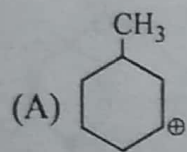
1. Which of the following carbocation is most stable ?



2. Which carbocation is least likely to be formed as an intermediate ?



3. Which one of the following carbocation would you expect to rearrange :



4. How many 1,2-shifts are involved during the course of following reaction :



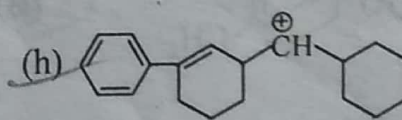
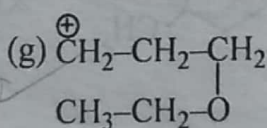
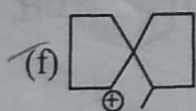
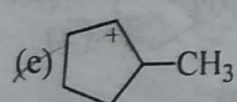
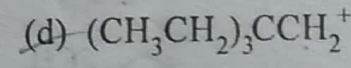
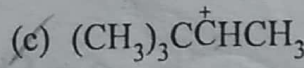
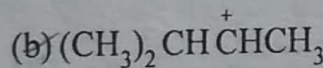
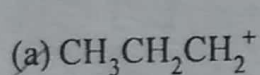
(A) 1

(B) 2

(C) 3

(D) 4

5. How many following carbocation undergo re-arrangement -



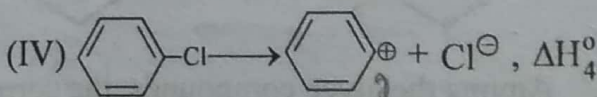
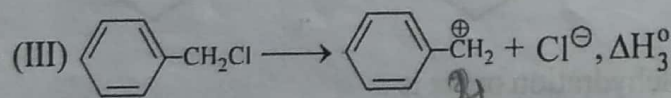
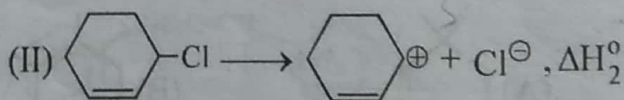
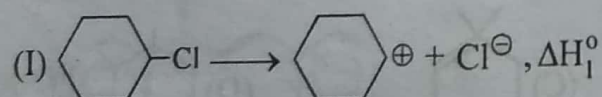
(A) 5

(B) 8

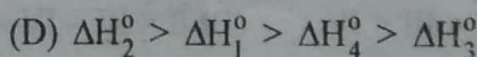
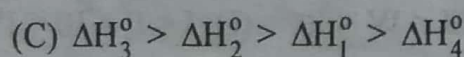
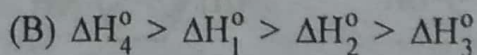
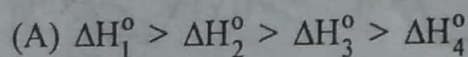
(C) 6

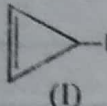
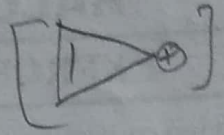
(D) 7

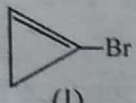
6. For the reactions

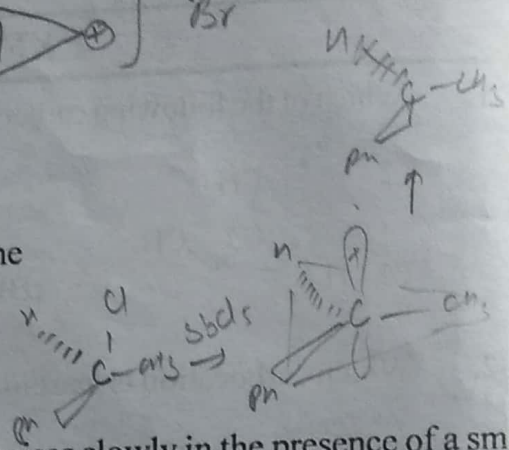


The correct decreasing order of enthalpies of reaction for producing carbocation is :



7.  Br, which is not the correct statement : \Rightarrow  Br⁻

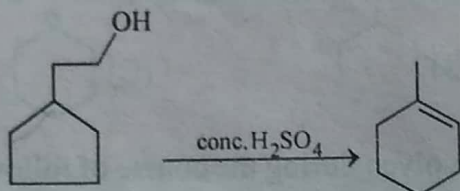
- (A) I is more soluble than bromocyclopropane
 (B) I gives pale yellow ppt. on addition with AgNO₃
 (C) I is having lower dipole moment than bromocyclopropane
 (D) I is more ionic than 



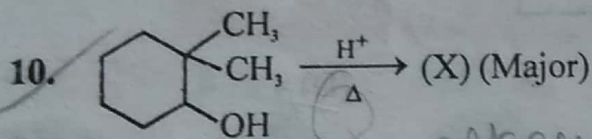
8. A solution of (-)-1-chloro-1-phenylethane in toluene racemises slowly in the presence of a small amount of SbCl₅, due to the formation of :-

- (A) carbanion (B) Carbene (C) carbocation (D) free radical

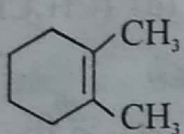
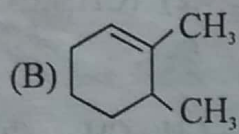
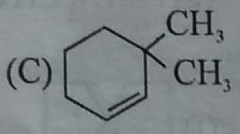
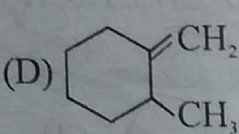
9. How many 1,2-Shifts are involved during the course of following reaction :

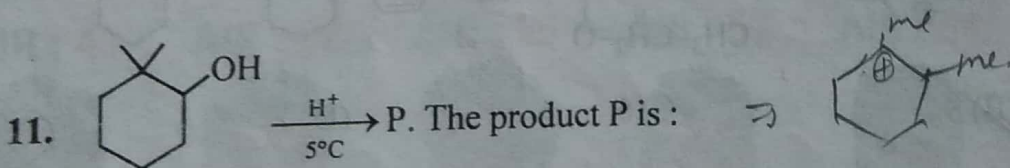


- (A) 1 (B) 2 (C) 3 (D) 4



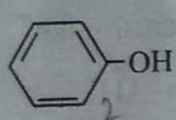
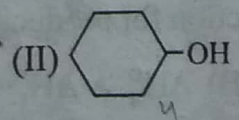
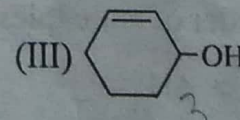
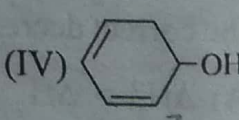
Product (X) is :

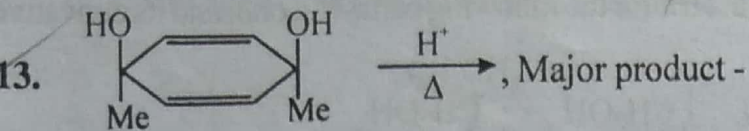
- (A)  (B)  (C)  (D) 



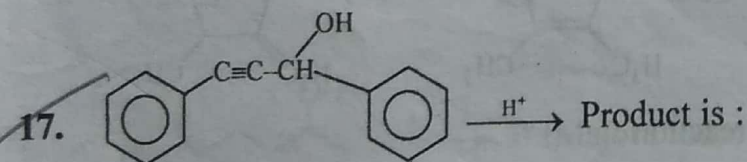
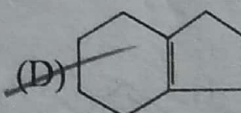
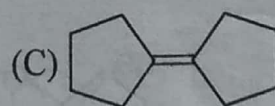
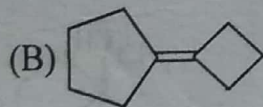
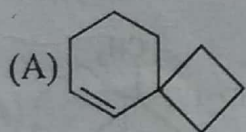
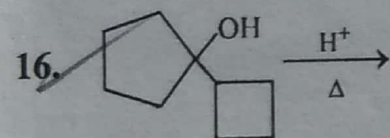
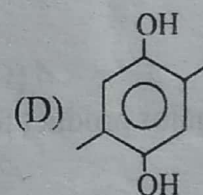
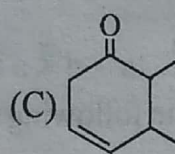
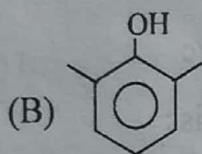
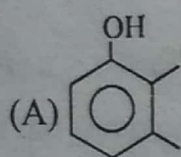
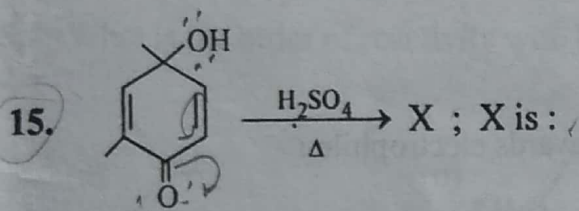
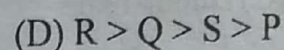
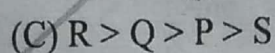
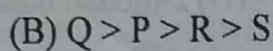
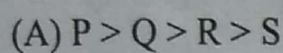
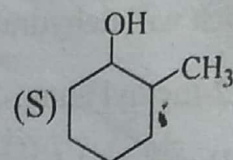
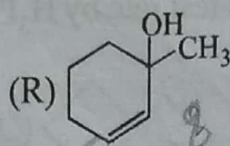
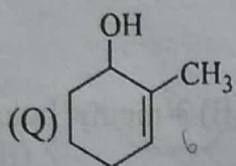
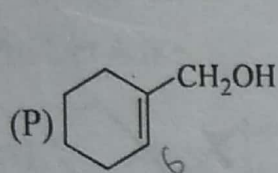
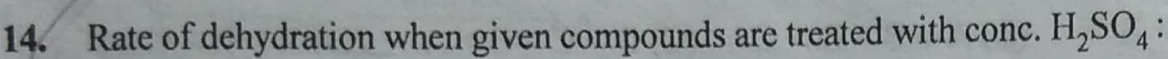
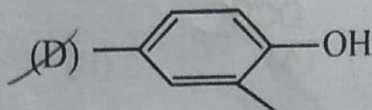
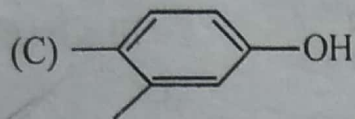
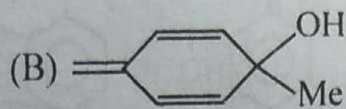
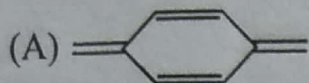
- (A)  (B)  (C)  (D) 

12. Among the given compounds, the correct dehydration order is :

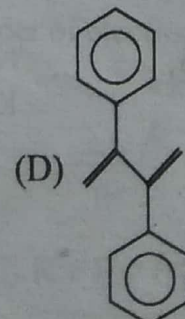
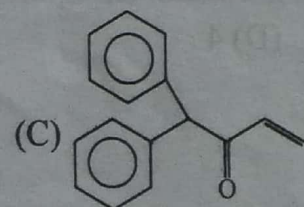
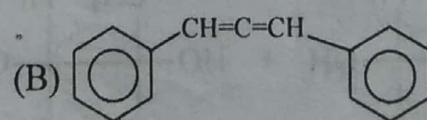
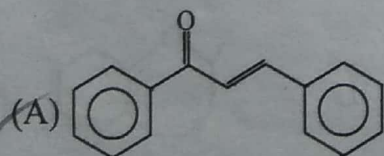
- (I)  (II)  (III)  (IV) 
 (A) I < II < III < IV (B) II < III < IV < I (C) I < III < IV < II (D) I < II < III = IV



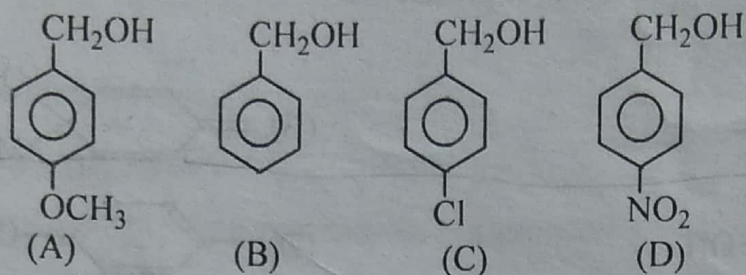
unstable



Stability & Basicity



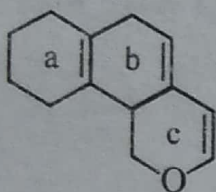
18. What is the decreasing order of rate of reaction with HBr for the following benzyl alcohol and its derivative



- (A) $A > C > D > B$ (B) $A > B > D > C$ (C) $D > C > B > A$ (D) $A > B > C > D$

19. Which will dehydrate at fastest rate by H_3PO_4 :

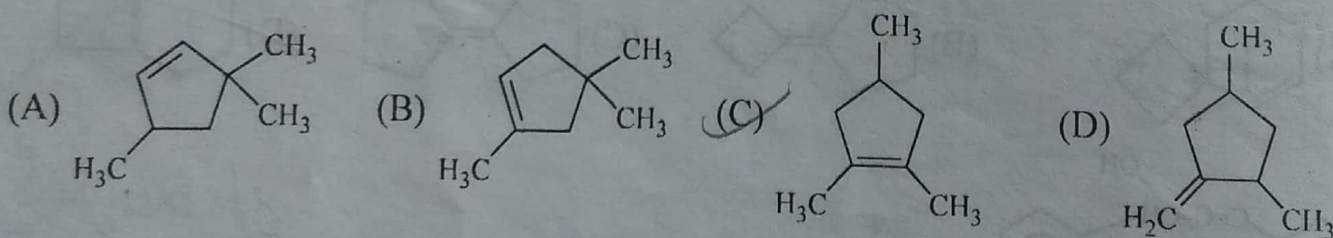
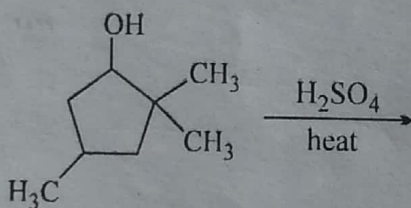
- (A) 2-methyl butan-2-ol (B) 3-methyl butan-2-ol
(C) Butan-1-ol (D) 2-methyl butan-1-ol



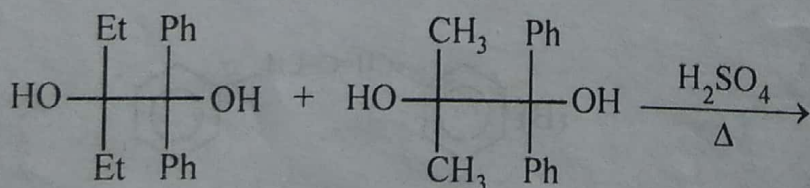
20. The double bond which is most reactive towards electrophile :

- (A) a (B) b (C) c (D) None

21. The major product formed in the following reaction is :

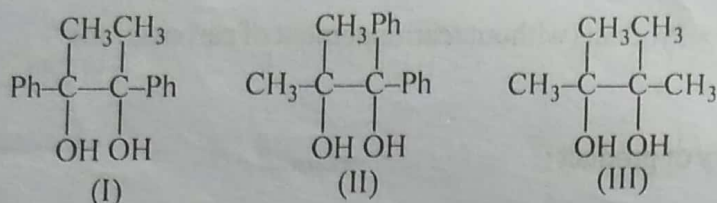


22. How many products are obtained in the given reaction :

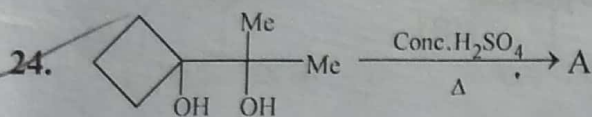


- (A) 1 (B) 2 (C) 3 (D) 4

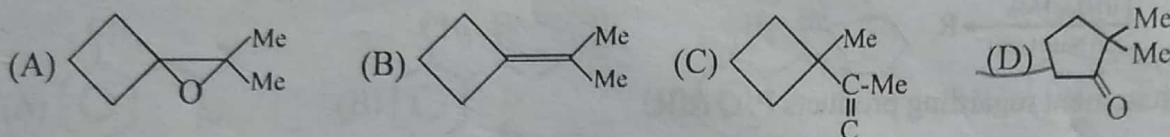
23. Compare rate of reaction towards pinacol pinacolone rearrangement.



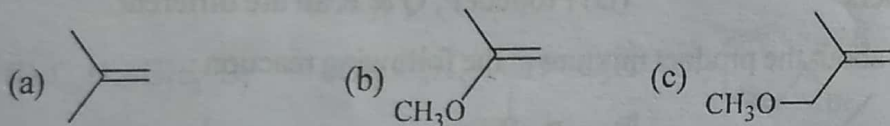
- (A) II > III > I (B) III > II > I (C) II > I > III (D) I > II > III



Product A is :

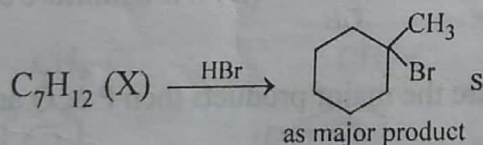


25. What is the order of reactivity with HBr :

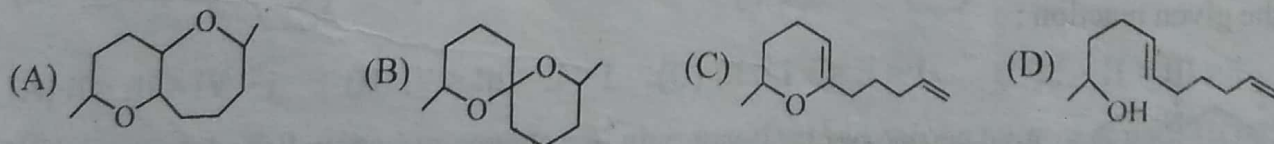
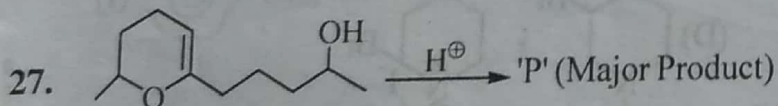
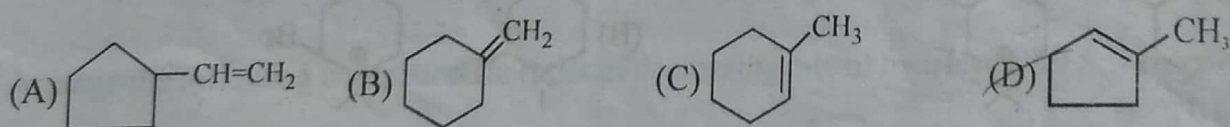


- (A) a > b > c (B) b > a > c (C) c > b > a (D) b > c > a

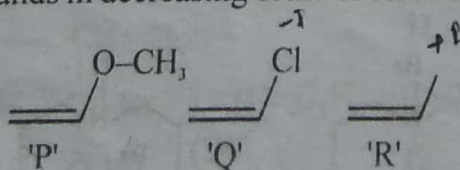
26. In the given reaction



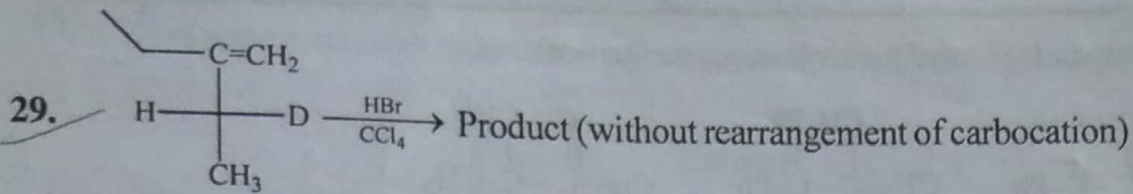
(X) can not be :



28. Arrange the following compounds in decreasing order of electrophilic addition :



- (A) P > Q > R (B) P > R > Q (C) R > P > Q (D) R > Q > P



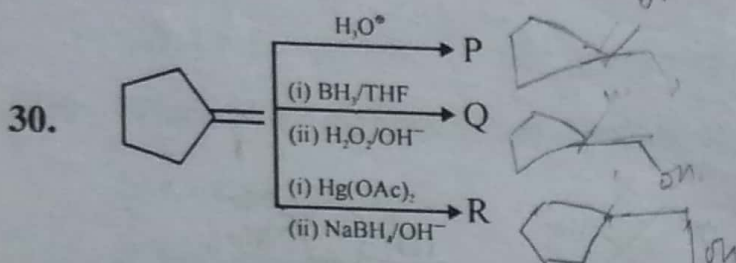
What is stereochemistry of product :

(A) Racemic mixture

(B) Optically inactive

(C) Mixture of diastereomers

(D) Meso product



Correct statement regarding products P, Q & R

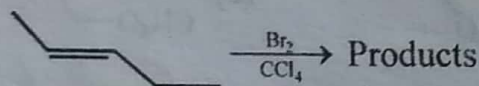
(A) Product P & R are same

(B) Product Q & R are same

(C) P & Q are functional isomers

(D) Product P, Q & R all are different

31. Select the incorrect statement about the product mixture in the following reaction :

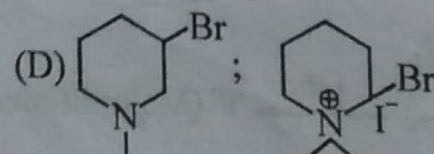
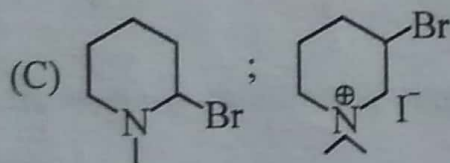
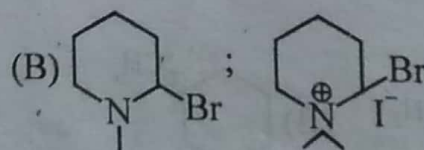
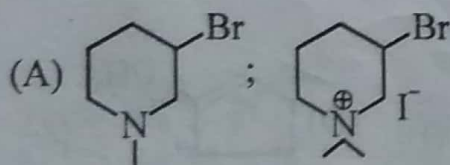
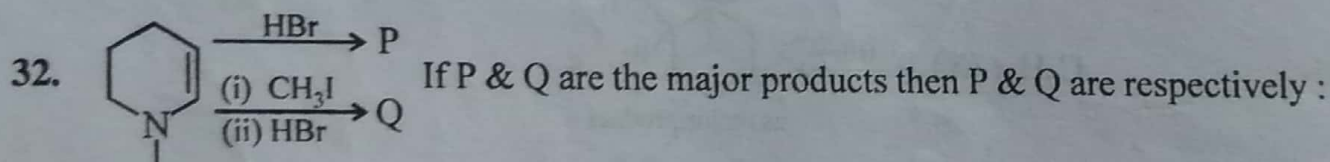


(A) It is optically active

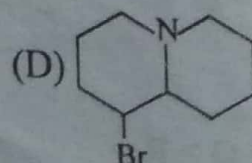
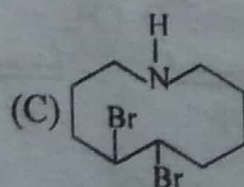
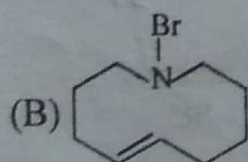
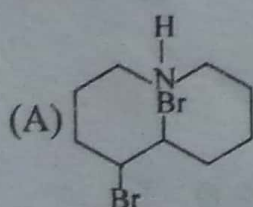
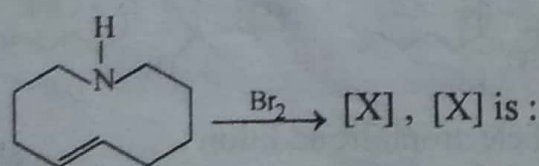
(B) It is racemic mixture

(C) It is a resolvable mixture

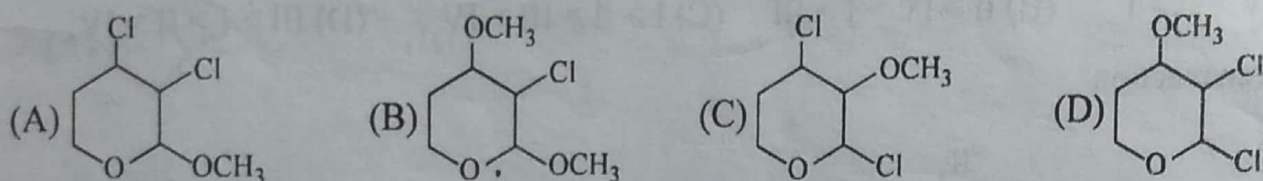
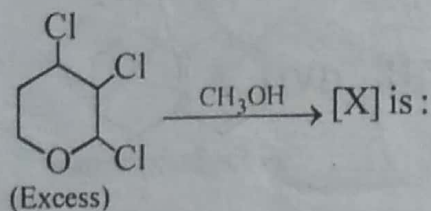
(D) It is a mixture of erythro compounds



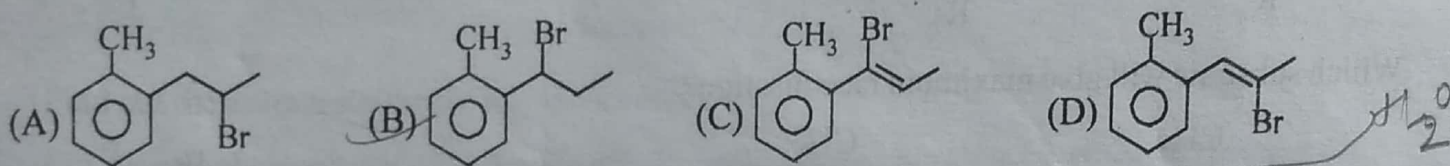
33. In the given reaction :



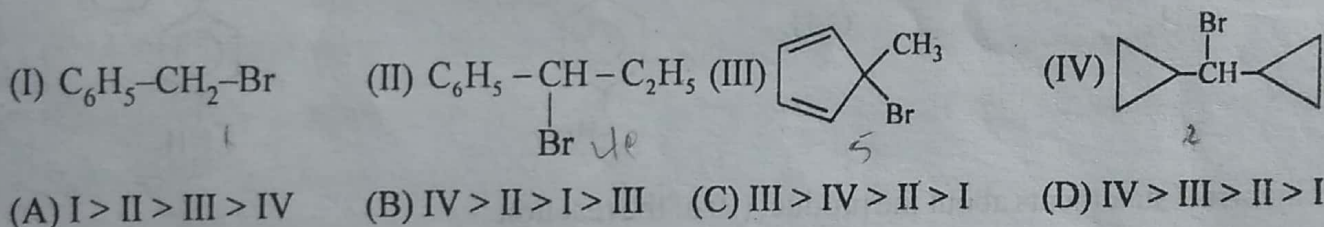
34. In the given reaction:



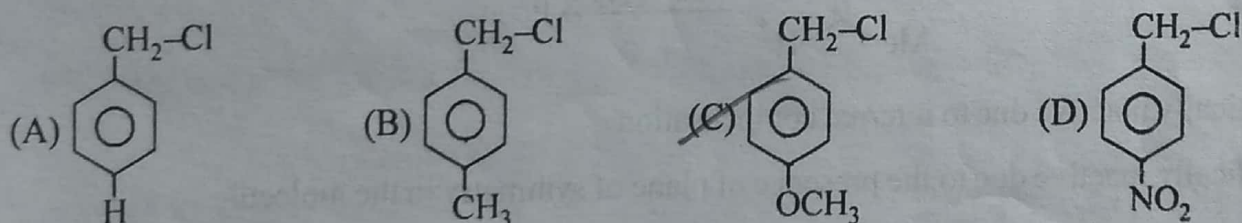
35. Which compound undergoes hydrolysis by the S_N1 mechanism at the fastest rate?



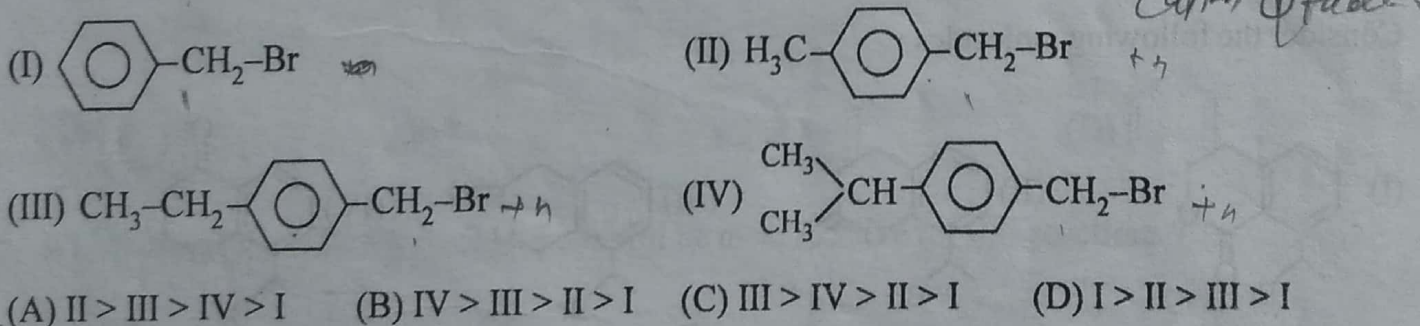
36. Arrange the following compounds in decreasing order of their reactivity for hydrolysis reaction



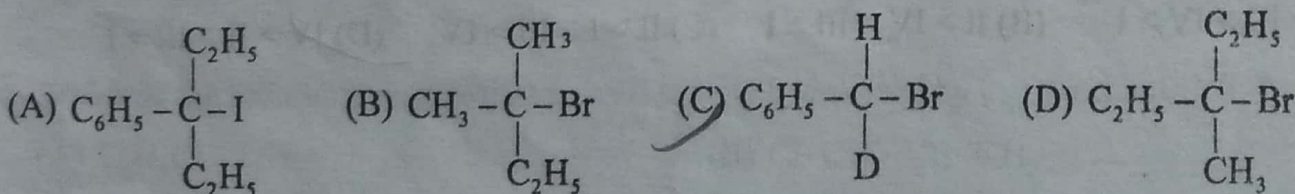
37. Which of the following is most reactive toward S_N1 reaction.

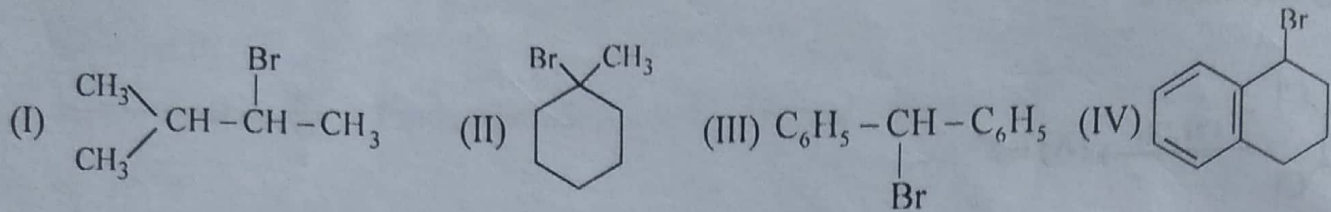


38. Arrange the following compounds in order of decreasing rate of hydrolysis for S_N1 reaction:



39. Which one of the following compounds will give enantiomeric pair on treatment with HOH?

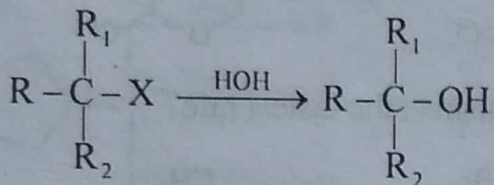




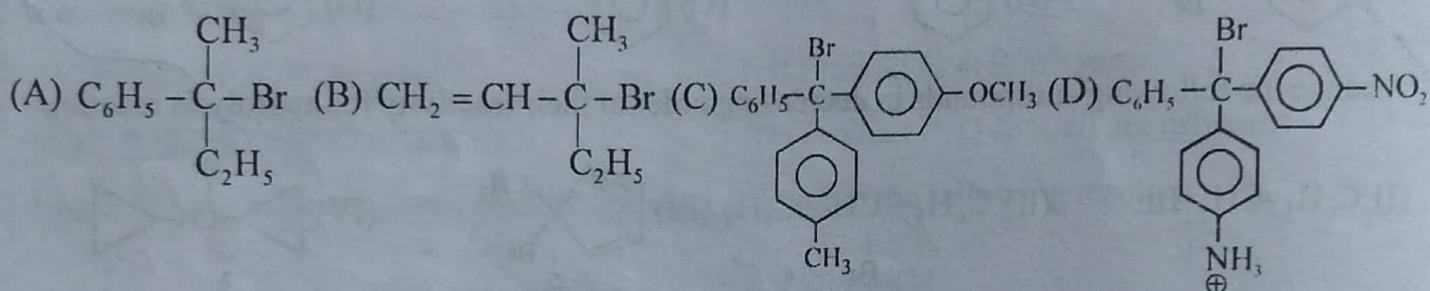
Q. Decide decreasing order of reactivity of above alkyl halide?

- (A) III > IV > II > I (B) II > IV > I > III (C) I > II > III > IV (D) III > I > II > IV

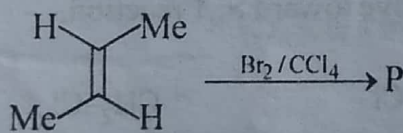
41. For the given reaction



Which substrate will give maximum racemisation?

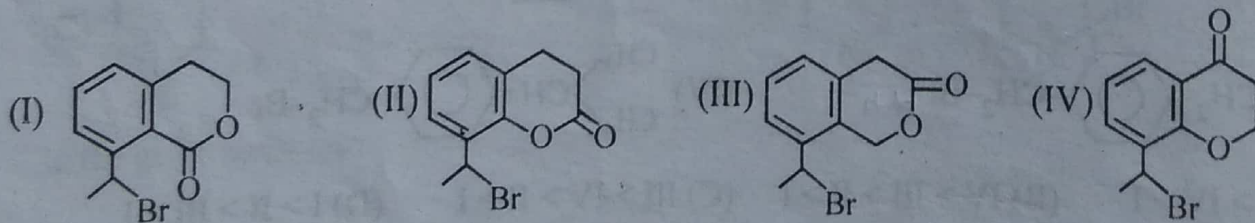


42. Select incorrect statements about the product (P) of the reaction :



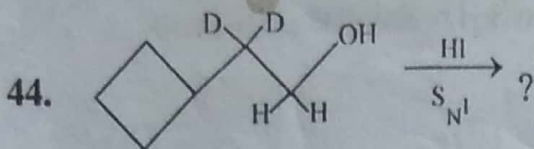
- (A) P is optically inactive due to internal compensation
 (B) P is optically inactive due to the presence of plane of symmetry in the molecule
 (C) The structure of P can have three optical isomers possible.
 (D) P can have four possible optical isomers.

43. Consider the following molecules :

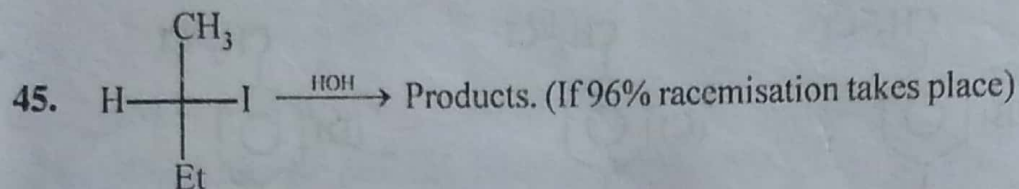
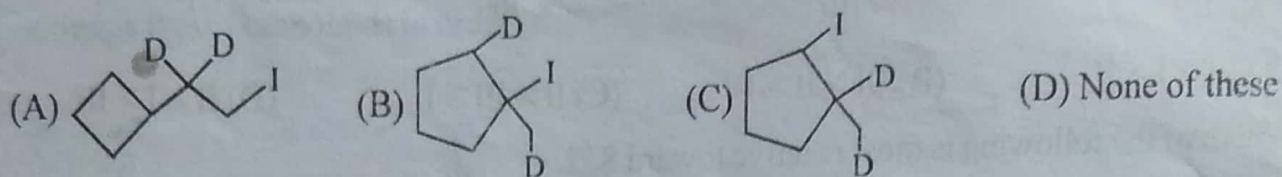


The correct decreasing ease of hydrolysis is :

- (A) II > III > IV > I (B) II > IV > III > I (C) II > I > III > IV (D) IV > II > III > I



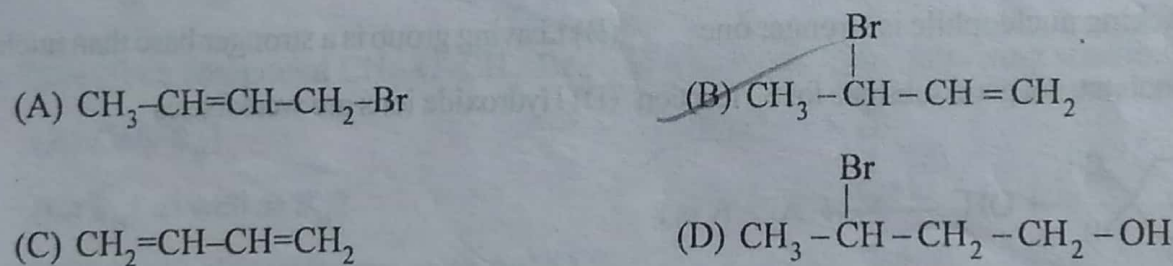
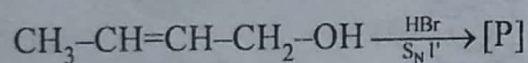
Major product is:



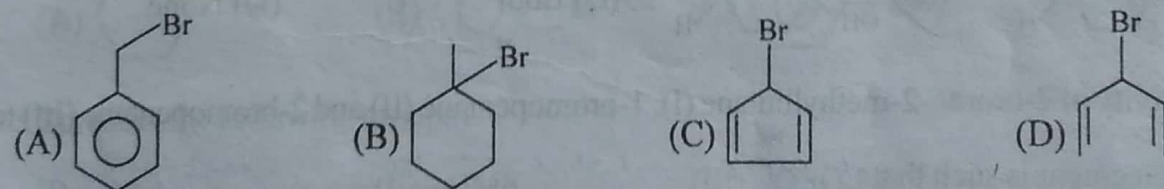
Find out the correct statement about the reaction.

- (A) Among the products 48% S and 48% R configuration containing molecules are present
 (B) Among the products 50% S and 50% R configuration containing molecules are present
 (C) Among the products 48% S and 52% R configuration containing molecules are present
 (D) Among the products 52% S and 48% R configuration containing molecules are present

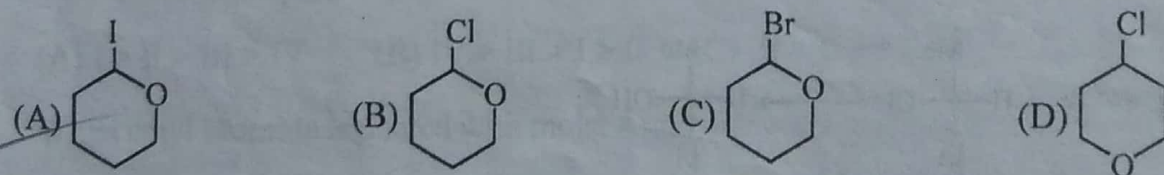
46. In the given reaction the product [P] can be :



47. Which of the following can not give S_N1 reaction easily?



48. Which one of the following compounds will be most reactive for S_N1 reactions ?



49. Which of the following compounds is most rapidly hydrolysed by S_N1 mechanism ?

