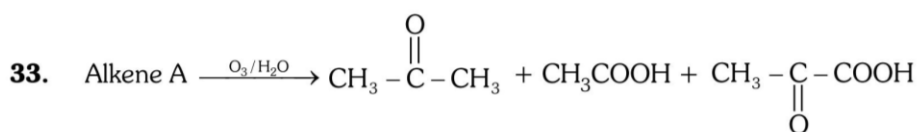
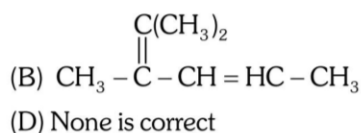
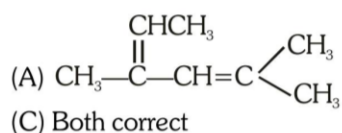




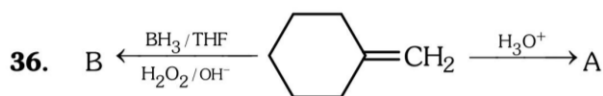
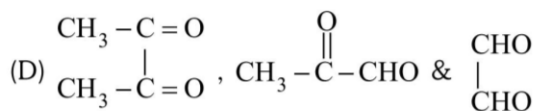
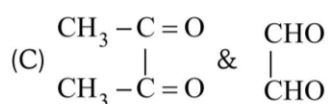
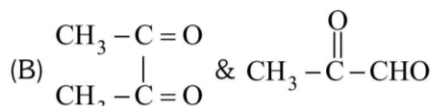
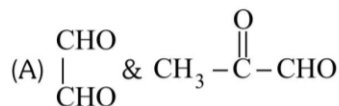
31. During the preparation of ethane by Kolbe's electrolytic method using inert electrodes the pH of the electrolyte –  
 (A) Increases progressively as the reaction proceeds  
 (B) Decreases progressively as the reaction proceeds  
 (C) Remains constant throughout the reaction  
 (D) May decrease of the the concentration of the electrolyte is not very high
32. When n-butane is heated in the presence of  $\text{AlCl}_3/\text{HCl}$  it will be converted into –  
 (A) Ethane (B) Propane (C) Butene (D) Isobutane



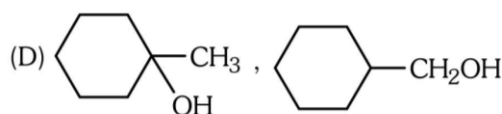
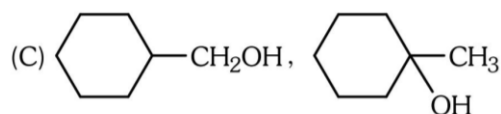
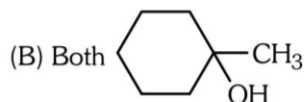
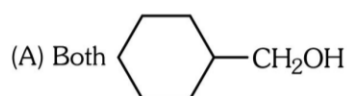
A can be –



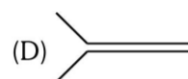
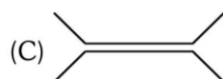
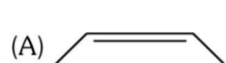
34. The addition of bromine to 1-Methyl Cyclohexene in 1,2-dichloroethane produces \_\_\_\_\_ dibromo derivatives:  
 (A) 2 (B) 3 (C) 4 (D) 6
35. O-xylene on reductive ozonolysis will give

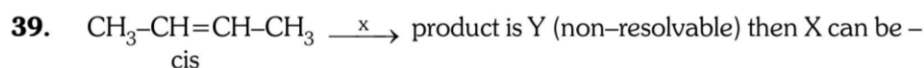
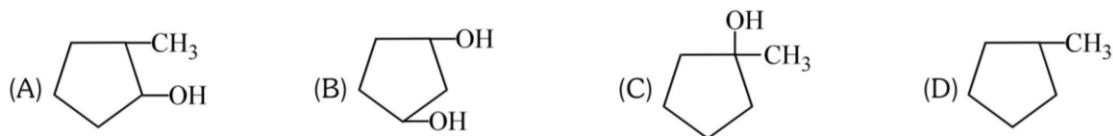
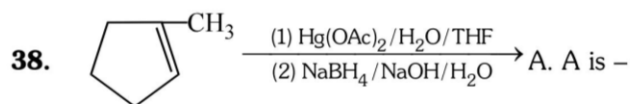


A and B are –

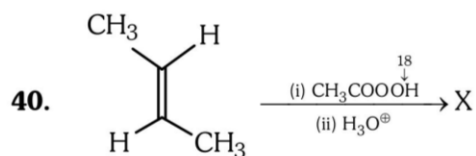


37. Which has least heat of hydrogenation –





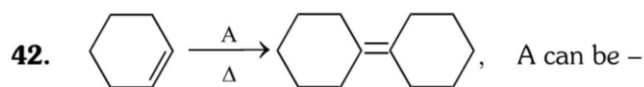
- (A)  $\text{Br}_2$  water (B)  $\text{HCO}_3\text{H}$  followed by  $\text{H}_3\text{O}^+$   
 (C) Cold alkaline  $\text{KMnO}_4$  (D) all of the above



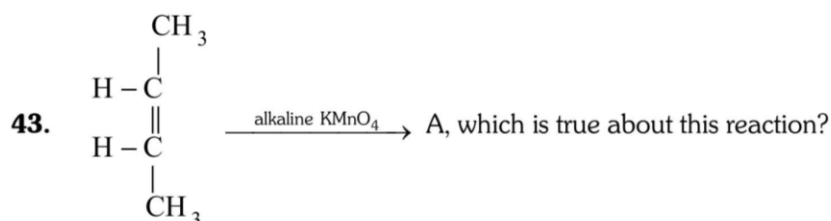
The probable structure of 'X' is



41. Which alkene on heating with alkaline  $\text{KMnO}_4$  solution gives acetone and a gas, which turns lime water milky –  
 (A) 2-Methyl-2-butene (B) Isobutylene  
 (C) 1-Butene (D) 2-Butene



- (A) Conc.  $\text{H}_2\text{SO}_4$  (B) alcoholic KOH (C)  $\text{Et}_3\text{N}$  (D) t-BuOK

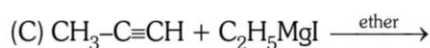
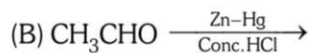
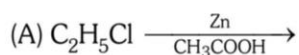


- (A) A is meso 2, 3-butane-di-ol formed by *syn* addition  
 (B) A is meso 2, 3-butane-di-ol formed by *anti* addition  
 (C) A is a racemic mixture of d and l, 2, 3-butane-di-ol formed by anti addition  
 (D) A is a racemic mixture of d and l, 2,3-butane-di-ol formed by *syn* addition

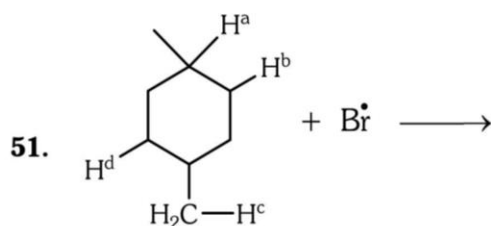
44. Mixture of one mole each of ethene and propyne on reaction with Na will form  $\text{H}_2$  gas at S.T.P. –  
 (A) 22.4 L (B) 11.2 L (C) 33.6 L (D) 44.8 L

45. Acetylene may be prepared using Kolbe's electrolytic method employing –  
 (A) Potassium acetate (B) Potassium succinate (C) Potassium fumarate (D) None of these
46. Ethyl iodide and n-propyl iodide are allowed to undergo wurtz reaction. The alkane which will not be obtained in this reaction is :  
 (A) butane (B) propane (C) pentane (D) hexane
47. On catalytic reduction ( $H_2/Pt$ ) how many alkenes will give 2-methylbutane ?  
 (A) 1 (B) 2 (C) 3 (D) 4
48. The decreasing order of anti-knocking value of octane number of the following is :  
 (I)  $CH_4$  (II)  $C_2H_6$  (III)  $C_3H_8$  (IV)  $C_4H_{10}$   
 (A) I > II > III > IV (B) I > III > IV > II (C) IV > III > II > I (D) None
49. The correct order of melting points :  
 (A) Decane > Nonane > Octane > Heptane (B) Heptane > Octane > Nonane > Decane  
 (C) Heptane > Nonane > Octane > Decane (D) Decane > Octane > Nonane > Heptane

50. Ethane can be prepared by :

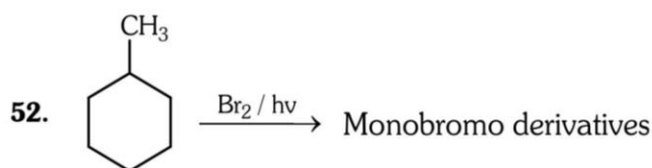


(D) All of these



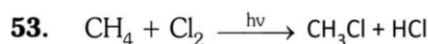
$Br^\bullet$  will abstract which of the hydrogen most readily :

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



The number of possible monobromo products is (excluding stereoisomers)

- (A) 4 (B) 5 (C) 8 (D) 10



To obtain high yields of  $CH_3Cl$ , the ratio of  $CH_4$  to  $Cl_2$  must be :

- (A) high (B) low (C) equal (D) can't be predicted

54. An alkane (mol. wt. = 86) on bromination gives only two monobromo derivatives (excluding stereoisomer). The alkane is :

- (A) 2-Methylpentane (B) 2,2-Dimethylbutane (C) 2,3-Dimethylbutane (D) 2,2-Dimethylpropane

