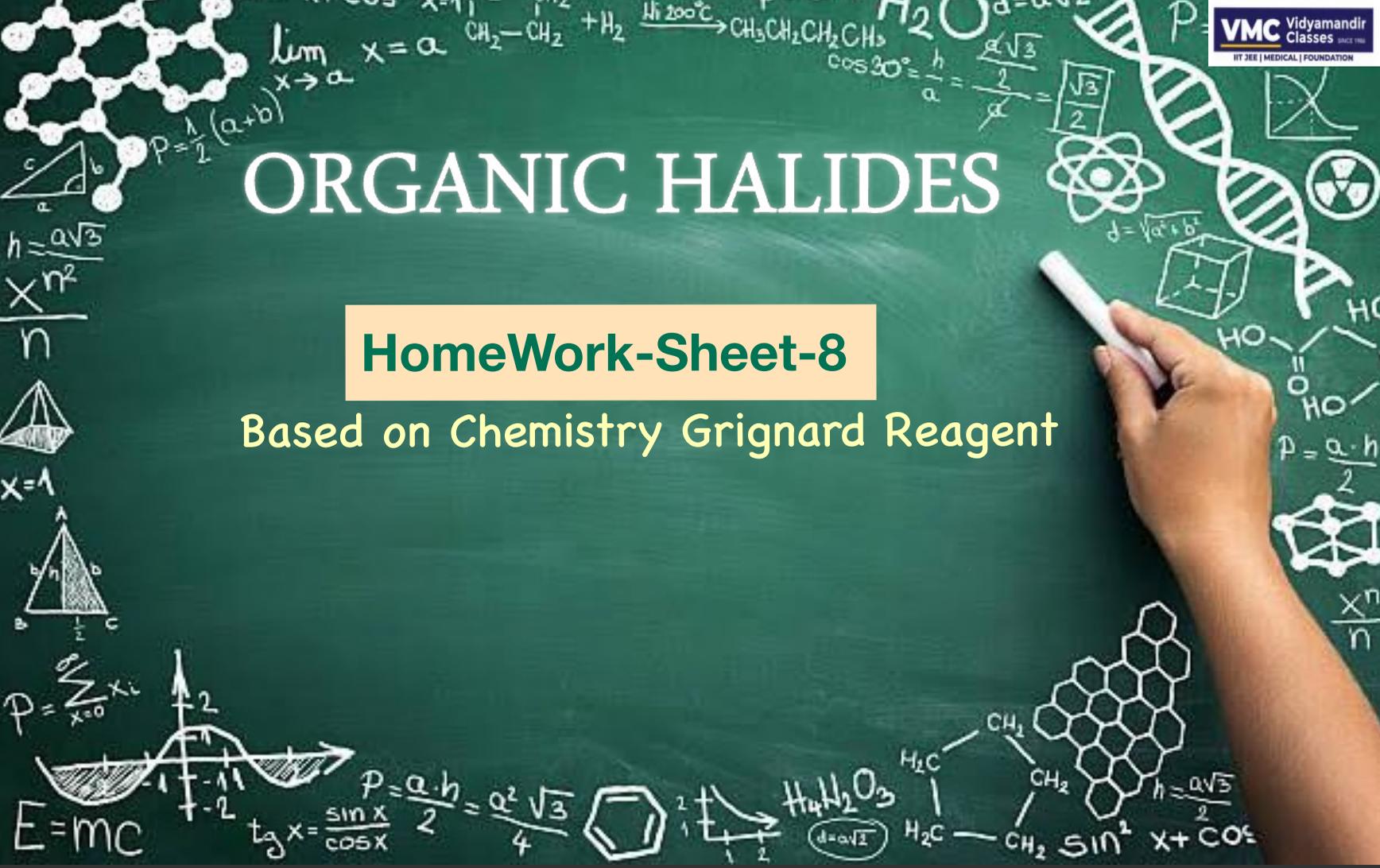


# ORGANIC HALIDES

## HomeWork-Sheet-8

Based on Chemistry Grignard Reagent

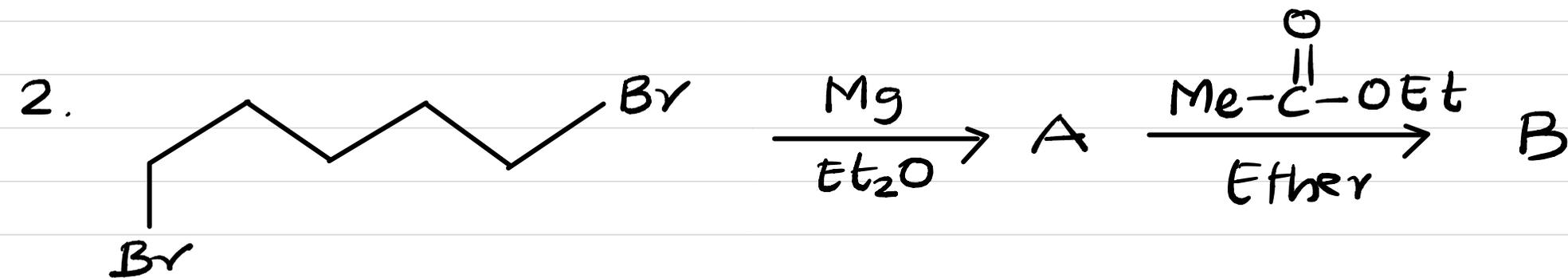
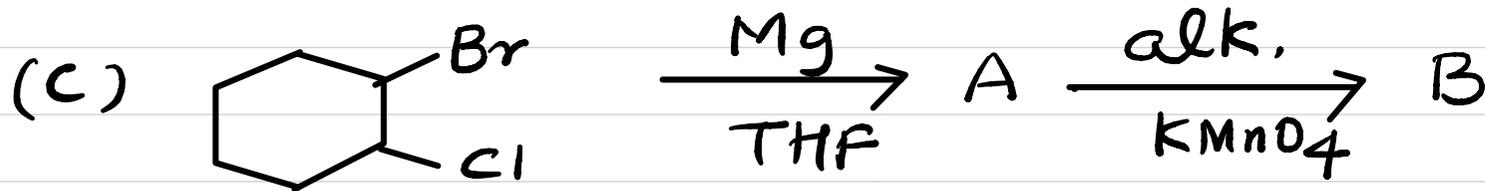
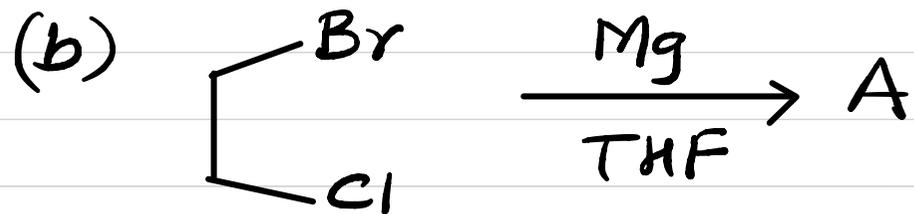


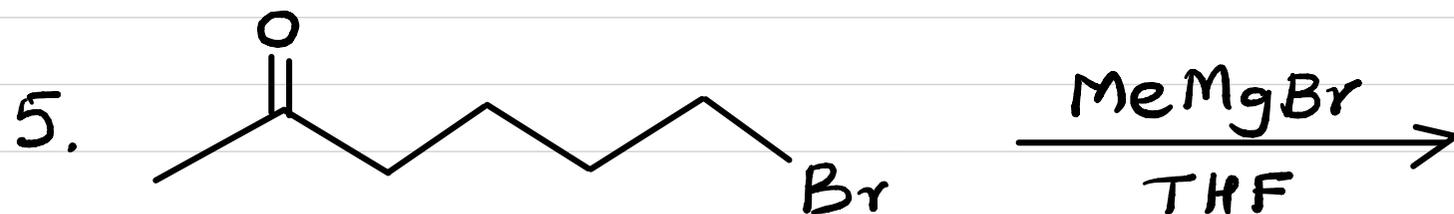
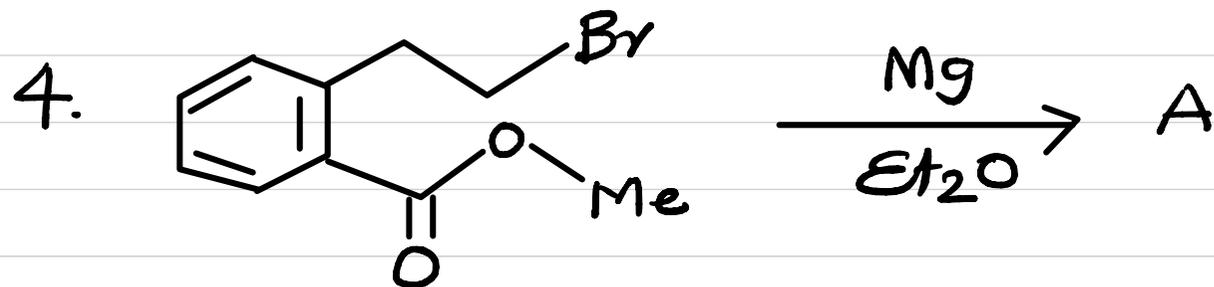
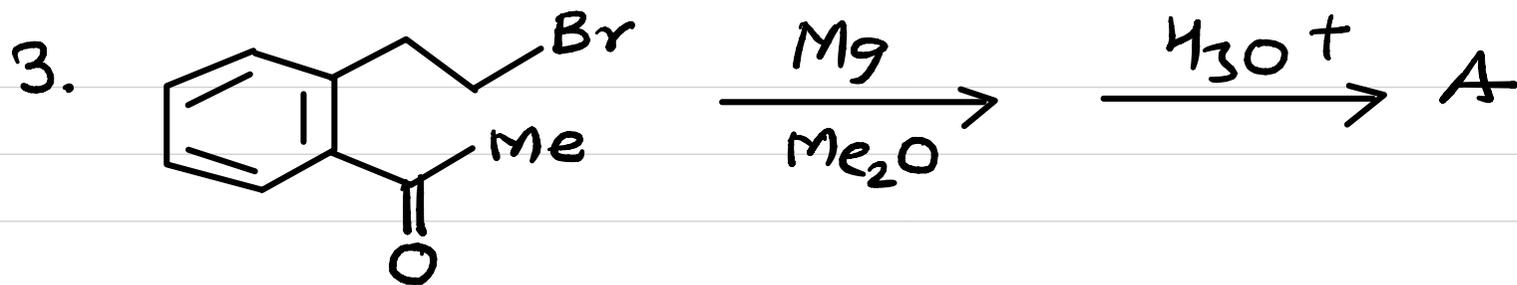
Q.1. How will you prepare:

(Based on  $\text{RMgX}$ )

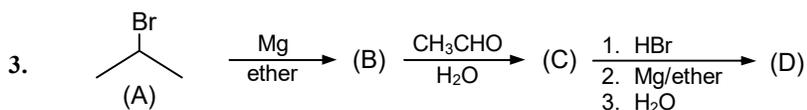
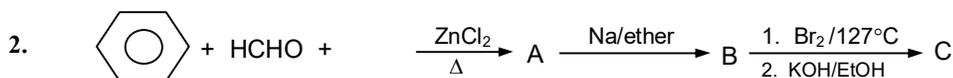
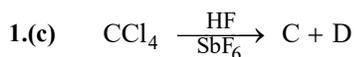
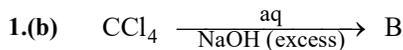
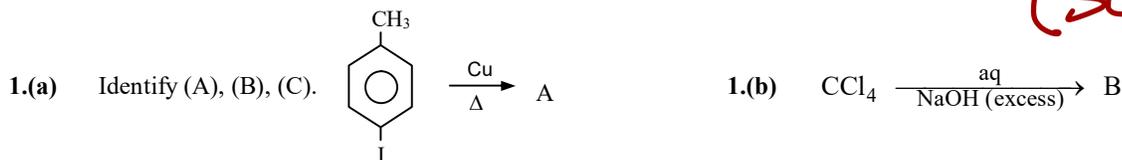
1. 2-Butanol from  $\text{MeMgBr}$
2.  $\text{Ph}_2\text{C}=\text{CH}_2$  from  $\text{PhMgBr}$  (Ph: Phenyl group)
3.  $\text{Ph}_2\text{-}\underset{\text{OH}}{\text{C}}\text{-CH}_3$  from  $\text{PhCHO}$
4.  $\text{Me}_2\text{-}\underset{\text{OH}}{\text{C}}\text{-CH}_3$  from  $\text{CH}_3\text{CN}$
5.  $\text{Me}_2\text{-}\underset{\text{OH}}{\text{C}}\text{-isopr}$  from  $\text{HCOOMe}$  (methyl formate)
6. 2-Butanol from methanol
7.  $\text{C}_6\text{H}_5\text{Br}$  from  $\text{PhMgBr}$
8.  $\text{PhCH}_2\text{Br}$  from  $\text{PhMgBr}$
9. Tert. butyl alcohol from isopropyl bromide
10. Acetophenone from ethyl alcohol

Q2. Identify the products: (Intramolecular)

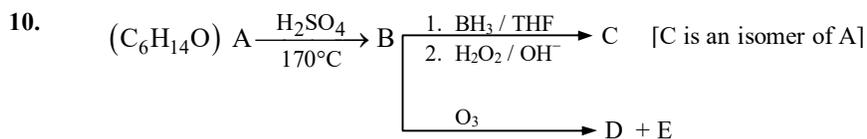
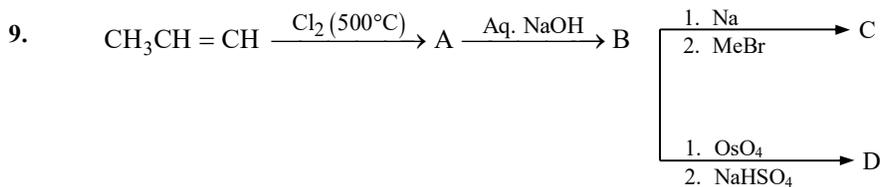
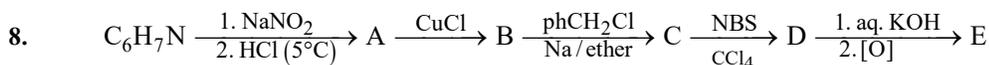
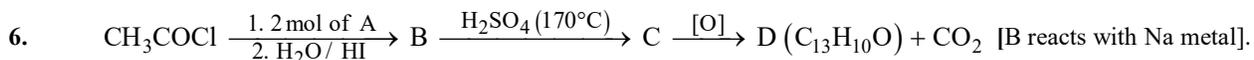
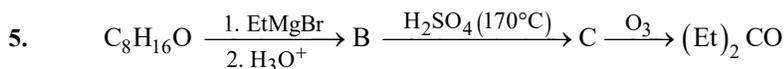
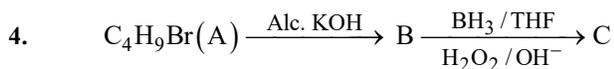




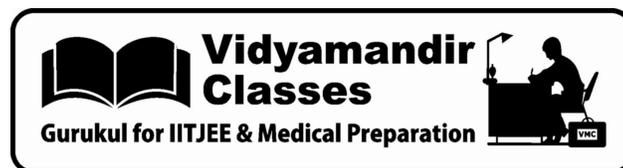
(50 MIN)



How will you obtain D from A in NOT more than 3 steps ?



D can be obtained by hydration of propyne in presence of H<sup>+</sup> and Hg<sup>2+</sup> ions.



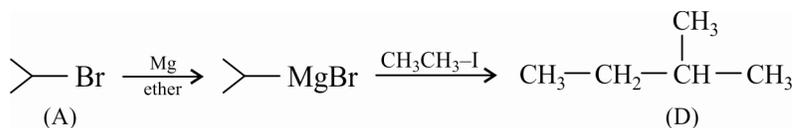
## Organic Halide Test-2 Solution

1. (a)  $A = \text{H}_3\text{C} - \text{C}_6\text{H}_4 - \text{C}_6\text{H}_4 - \text{CH}_3$
- (b)  $B = \text{Na}_2\text{CO}_3$
- (c)  $C = \text{CCl}_2\text{F}_2 + \text{HCl}$

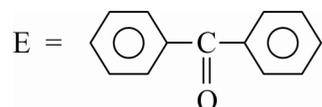
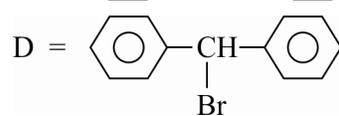
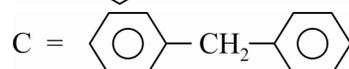
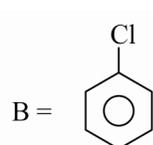
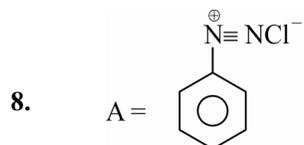
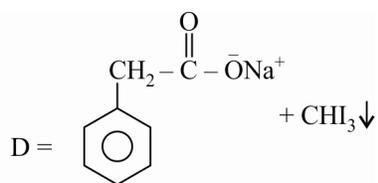
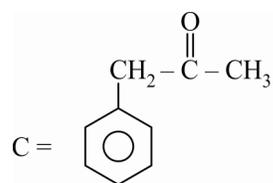
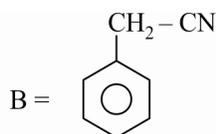
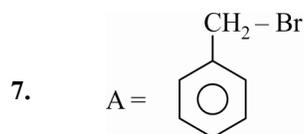
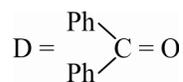
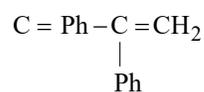
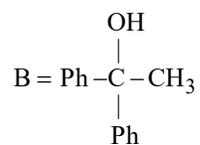
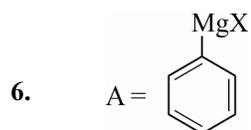
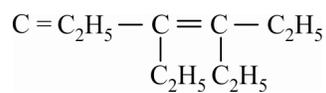
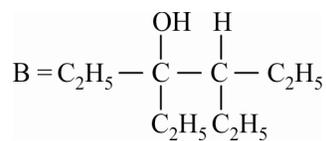
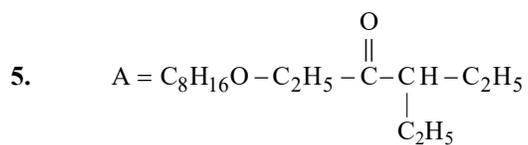
2.  $A = \text{C}_6\text{H}_5\text{CH}_2\text{Cl}$
- $B = \text{C}_6\text{H}_5\text{CH}_2\text{CH}_2\text{C}_6\text{H}_5$
- $C = \text{C}_6\text{H}_5\text{CH}=\text{CHC}_6\text{H}_5$

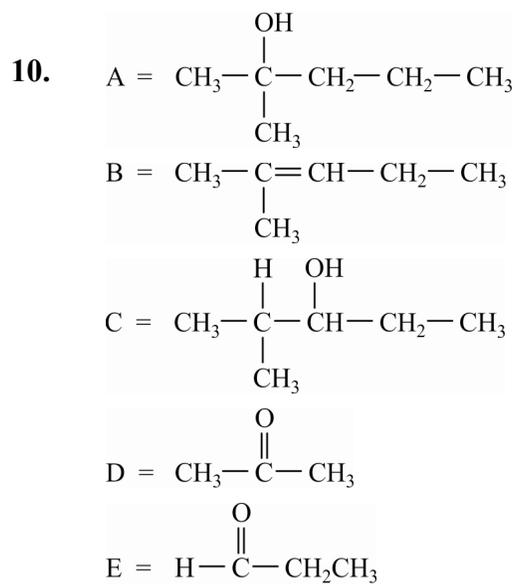
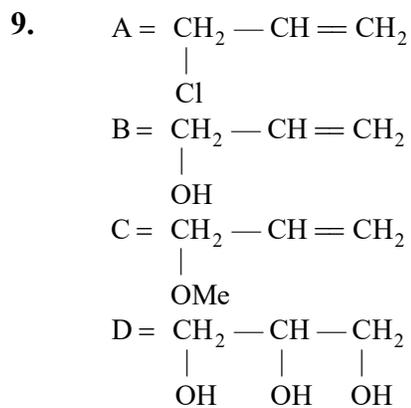
3.  $B = \text{CH}_3\text{CH}(\text{MgBr})\text{CH}_3$
- $C = \text{CH}_3 - \underset{\text{H}}{\overset{\text{OH}}{\text{C}}} - \text{CH}(\text{CH}_3)_2$
- $D = \text{CH}_3 - \text{CH}_2 - \underset{\text{CH}_3}{\text{CH}} - \text{CH}_3$

Also



4.  $A = \text{CH}_3 - \underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}} - \text{Br}$
- $B = \text{CH}_3 - \underset{\text{CH}_3}{\text{C}} = \text{CH}_2$
- $C = \text{CH}_3 - \underset{\text{H}}{\overset{\text{CH}_3}{\text{C}}} - \text{CH}_2 - \text{OH}$
- $D = \text{CH}_3 - \underset{\text{CH}_3}{\overset{\text{CH}_3}{\text{C}}} - \text{OH}$





**Answers to Class Test - 3 | Organic Halides**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B	D	ABD	C	BC	AB	A	D	AB	B	AD	C	C	C	CD

Organic Halides	Class Test-3	Chemistry
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In this Objective Worksheet, you are given questions to solve. Choose the correct alternative. EACH QUESTIONS HAS ONLY ONE CORRECT OPTION. However, questions marked with \* may have More than One Correct option :

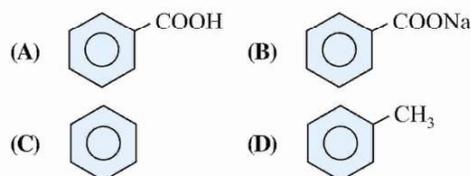
(45 Min)

1. An organic halide (X) is shaken with aqueous NaOH followed by the addition of dil. HNO<sub>3</sub> and silver nitrate solution gave white precipitate. The compound (X) is :

- (A) C<sub>6</sub>H<sub>4</sub>(CH<sub>3</sub>)Br      (B) C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>Cl  
(C) C<sub>6</sub>H<sub>5</sub>Cl              (D) CH<sub>2</sub>=CHCl

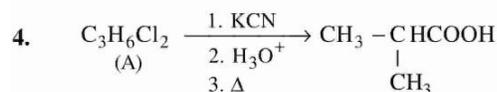
2. Toluene reacts with excess of Cl<sub>2</sub> in presence of sunlight to give a product which on hydrolysis with aq. NaOH followed by acidification gives an organic compound (A).

(A) on reduction with HI & Red P gives :



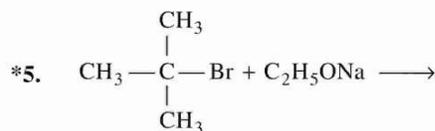
\*3. Bottles containing some organic halides lost their original labels. They were labelled A and B for testing. A and B were separately taken in test tubes and boiled with NaOH solution. The end solution in each tube was made acidic with dilute HNO<sub>3</sub> and then some AgNO<sub>3</sub> solution was added. Substance (B) give a yellow precipitate, while (A) gave a white precipitate. Which of the following statement(s) is (are) true for this experiment :

- (A) A may be CH<sub>2</sub>=CHCH<sub>2</sub>Cl  
(B) B may be C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>I  
(C) A may p-chlorotoluene  
(D) B may be p-nitrobenzyl bromide



Hence A is :

- (A) 1, 1 dichloro propane  
(B) 1, 2 dichloro propane  
(C) 2, 2 dichloro propane  
(D) 1, 3 dichloro propane

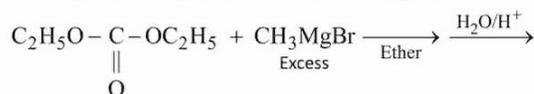


Which of the following is (are) correct about products ?

- (A)  $CH_3 - \underset{\substack{| \\ CH_3}}{\overset{CH_3}{C}} - OC_2H_5$  is major  
(B)  $CH_3 - C = CH_2$  is major  
(C)  $CH_3 - \underset{\substack{| \\ CH_3}}{\overset{CH_3}{C}} - OC_2H_5$  is minor  
(D)  $CH_3 - C = CH_2$  is minor

\*6.  $C_3H_6Cl_2 [X] \xrightarrow{aq. KOH} [Y]$ . Y resist oxidation. Which of the following is(are) correct ?  
(A) Y responds to iodoform test  
(B) X is non-terminal Gem dihalide  
(C) X is terminal Gem dihalide  
(D) Y reacts with alcoholic KOH and chloroform to give a substitute for tear gas

7. Identify the final product in the following reaction :



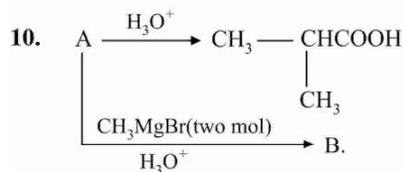
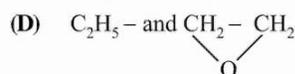
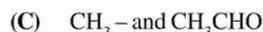
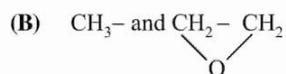
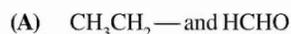
- (A) (CH<sub>3</sub>)<sub>3</sub>COH + C<sub>2</sub>H<sub>5</sub>OH  
(B) (C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>C(OH)CH<sub>3</sub>  
(C) (CH<sub>3</sub>)<sub>2</sub>CO + C<sub>2</sub>H<sub>5</sub>OH  
(D) (C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>CO + CH<sub>3</sub>OH

8. Which one of the following statements is wrong?

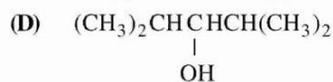
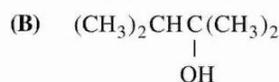
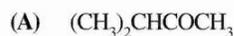
- (A) Iodoform is used as antiseptic  
(B) Chloroform can be used as anaesthetic  
(C) Chloropicrin is used as insecticide  
(D) Chloretone is used as antiseptic



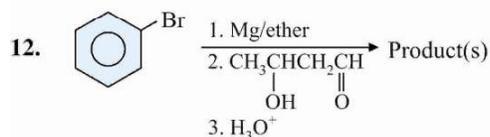
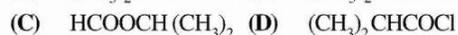
R and A are :



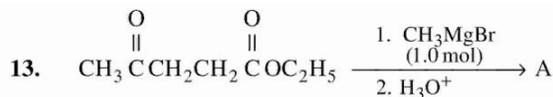
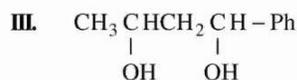
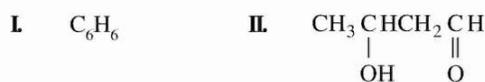
B is :



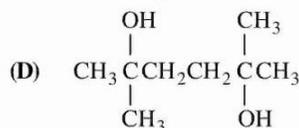
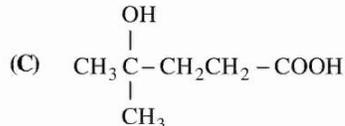
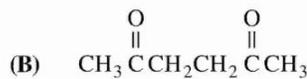
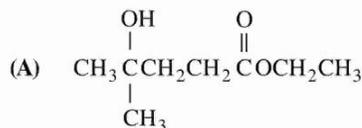
\*11. The compound (A) in the above Q.(10) is :



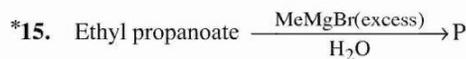
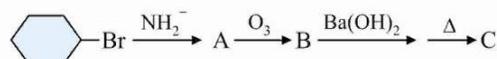
Select the products from the following :



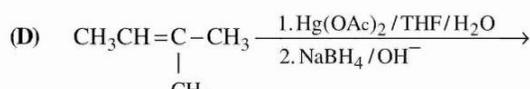
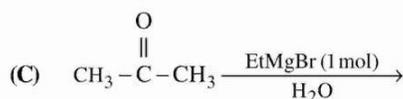
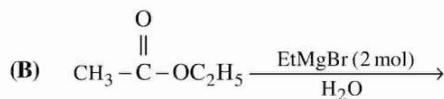
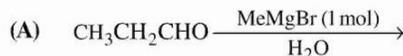
A formed in this reaction is :



14. The end product in following sequence of reactions is :



P can also be obtained by :



### Answers to Class Test - 3 | Organic Halides

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B	D	ABD	C	BC	AB	A	D	AB	B	AD	C	C	C	CD

# THANK

<b>39</b> 88.906 3338 1.1 1526 <b>Y</b> [Kr]4d5s <sup>2</sup> 4.47 3	<b>8</b> 15.999 -182.82 3.5 -222.65 <b>O</b> [He]2s <sup>2</sup> 2p <sup>4</sup> 1.43 -2	<b>92</b> 238.029 4134 1.2 1132 <b>U</b> [Rn]5f <sup>3</sup> 6d7s <sup>2</sup> 19.0 3,4,5,6
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