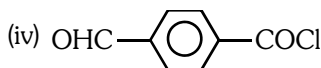
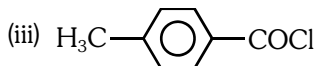
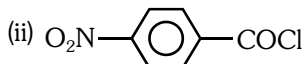
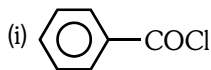


**AIPMT 2007**

1. Consider the following compounds:



The correct order of reactivity towards hydrolysis is:-

- (1) (i) > (ii) > (iii) > (iv)  
 (2) (iv) > (ii) > (i) > (iii)  
 (3) (ii) > (iv) > (i) > (iii)  
 (4) (ii) > (iv) > (iii) > (i)

2. Which one of the following on treatment with 50% aq. NaOH yields the corresponding alcohol and acid

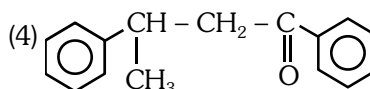
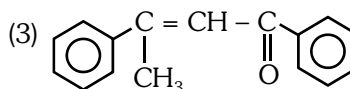
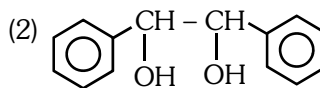
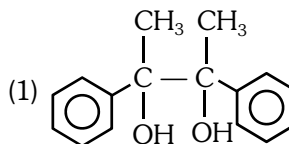
- (1)  $C_6H_5CHO$   
 (2)  $CH_3CH_2CH_2CHO$   
 (3)  $CH_3COCH_3$   
 (4)  $CH_3CHO$

3. The product formed in aldol reaction is :-

- (1) a  $\beta$ -hydroxy aldehyde or ketone  
 (2) an  $\alpha$ -hydroxy aldehyde or ketone  
 (3) an  $\alpha$ ,  $\beta$ -unsaturated ester  
 (4) a  $\beta$ -hydroxy acid

**AIPMT 2008**

4. Acetophenone when reacted with a base,  $C_2H_5ONa$ , yields a stable compound which has the structure :-



5. A strong base can abstract an  $\alpha$ -hydrogen from

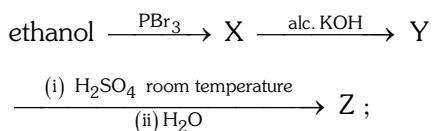
- (1) Ketone (2) Alkane  
 (3) Alkene (4) Amine

**AIPMT 2009**

6.  $H_2COH.CH_2OH$  on heating with periodic acid gives :-

- (1)  $2 \begin{array}{c} H \\ \diagup \quad \diagdown \\ C=O \end{array}$  (2)  $2CO_2$   
 (3)  $2HCOOH$  (4)  $\begin{array}{c} CHO \\ | \\ CHO \end{array}$

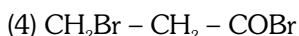
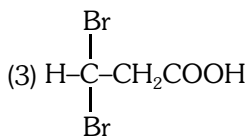
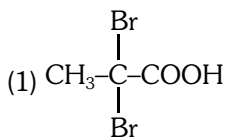
7. Consider the following reaction,



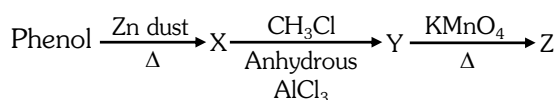
the product Z is :-

- (1)  $CH_3CH_2OH$   
 (2)  $CH_2 = CH_2$   
 (3)  $CH_3CH_2 - O - CH_2 - CH_3$   
 (4)  $CH_3 - CH_2 - O - SO_3H$

8. Propionic acid with  $\text{Br}_2/\text{P}$  yields a dibromo product. Its structure would be :-



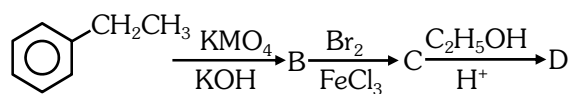
9. Consider the following reaction :



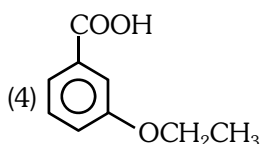
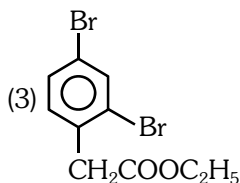
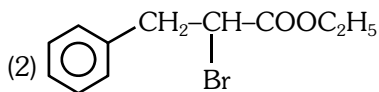
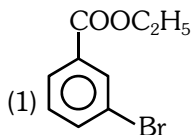
the product Z is :-

- (1) Benzene (2) Toluene  
(3) Benzaldehyde (4) Benzoic acid

10. In a set of reactions, ethyl benzene yielded a product D



'D' would be :-



## AIPMT 2010

11. Which of the following reactions will not result in the formation of carbon-carbon bonds ?

- (1) Friedel-Crafts acylation  
(2) Reimer-Tieman reaction  
(3) Cannizzaro reaction  
(4) Wurtz reaction

12. When glycerol is treated with excess of HI, it produces :-

- (1) allyl iodide  
(2) propene  
(3) glyceryl triiodide  
(4) 2-iodopropane

13. Match the compounds given in List-I with their characteristic reactions given in List-II. Select the correct option.

### List-I (Compounds)

- (a)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$   
(b)  $\text{CH}_3\text{C}\equiv\text{CH}$   
(c)  $\text{CH}_3\text{CH}_2\text{COOCH}_3$   
(d)  $\text{CH}_3\text{CH}(\text{OH})\text{CH}_3$

### List-II (Reactions)

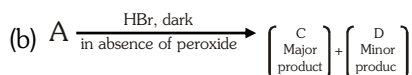
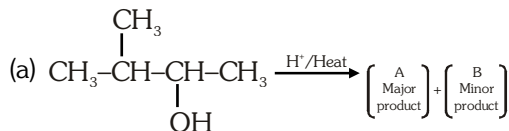
- (i) Alkaline hydrolysis  
(ii) With KOH (alcohol) and  $\text{CHCl}_3$  produces bad smell  
(iii) Gives white ppt. with ammonical  $\text{AgNO}_3$   
(iv) With Lucas reagent cloudiness appears after 5 minutes

### Options :

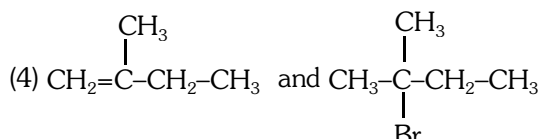
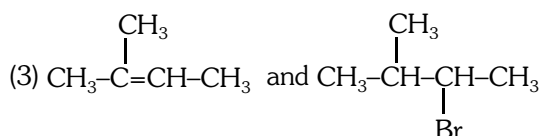
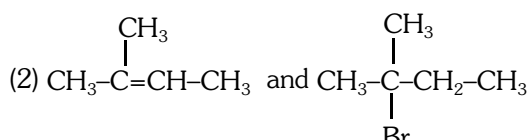
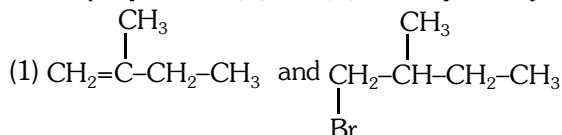
- |     |       |       |       |       |
|-----|-------|-------|-------|-------|
|     | (a)   | (b)   | (c)   | (d)   |
| (1) | (iii) | (ii)  | (i)   | (iv)  |
| (2) | (ii)  | (iii) | (i)   | (iv)  |
| (3) | (iv)  | (ii)  | (iii) | (i)   |
| (4) | (ii)  | (i)   | (iv)  | (iii) |

**AIPMT Pre. 2011**

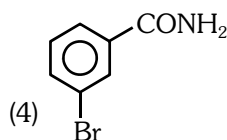
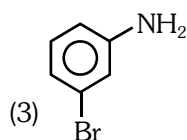
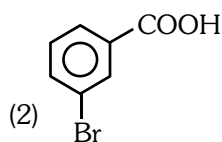
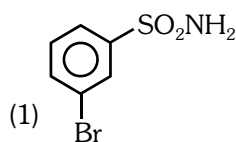
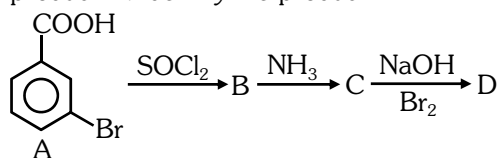
14. In the following reactions,



the major products (A) and (C) are respectively :-



15. In a set of reactions m-bromobenzoic acid gave a product D. Identify the product D



16. Clemmensen reduction of a ketone is carried out in the presence of which of the following ?

- (1) Glycol with KOH
- (2) Zn-Hg with HCl
- (3)  $\text{LiAlH}_4$
- (4)  $\text{H}_2$  and Pt as catalyst

**AIPMT Mains 2011**

17. An organic compound 'A' on treatment with  $\text{NH}_3$  gives 'B' which on heating gives 'C'. 'C' when treated with  $\text{Br}_2$  in the presence of KOH produces ethylamine. Compound 'A' is :-

- (1)  $\text{CH}_3\text{CH}_2\text{COOH}$
- (2)  $\text{CH}_3\text{COOH}$
- (3)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$
- (4)  $\text{CH}_3-\overset{\text{CH}_3}{\text{CH}}\text{COOH}$

18. Match the compounds given in List-I with List-II and select the suitable option using the code given below.

**List-I**

**List-II**

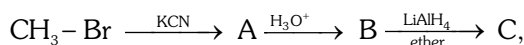
- |                        |                           |
|------------------------|---------------------------|
| (a) Benzaldehyde       | (i) Phenolphthalein       |
| (b) Phthalic anhydride | (ii) Benzoin condensation |
| (c) Phenyl benzoate    | (iii) Oil of wintergreen  |
| (d) Methyl salicylate  | (iv) Fries rearrangement  |

**Code :**

- |          |       |       |       |
|----------|-------|-------|-------|
| (a)      | (b)   | (c)   | (d)   |
| (1) (ii) | (i)   | (iv)  | (iii) |
| (2) (iv) | (i)   | (iii) | (ii)  |
| (3) (iv) | (ii)  | (iii) | (i)   |
| (4) (ii) | (iii) | (iv)  | (i)   |

**AIPMT Pre. 2012**

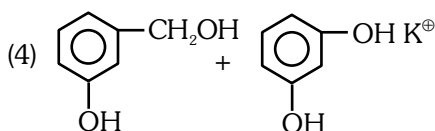
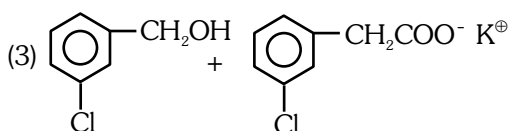
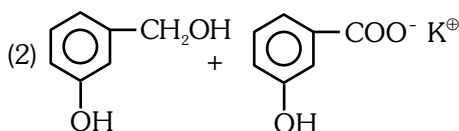
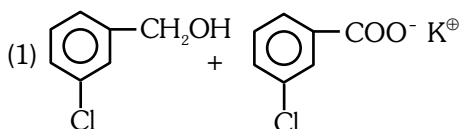
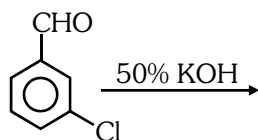
19. In the following sequence of reactions



the end product (C) is:

- (1) Acetaldehyde
- (2) Ethyl alcohol
- (3) Acetone
- (4) Methane

20. Predict the products in the given reaction.

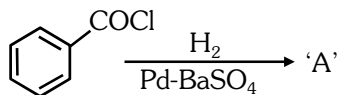


21.  $\text{CH}_3\text{CHO}$  and  $\text{C}_6\text{H}_5\text{CH}_2\text{CHO}$  can be distinguished chemically by :

- (1) Tollen's reagent test
- (2) Fehling solution test
- (3) Benedict test
- (4) Iodoform test

#### AIPMT Mains 2012

22. Consider the following reaction :



The product 'A' is :

- |   |                                     |
|---|-------------------------------------|
| (1) $\text{C}_6\text{H}_5\text{COCH}_3$ | (2) $\text{C}_6\text{H}_5\text{Cl}$ |
| (3) $\text{C}_6\text{H}_5\text{CHO}$    | (4) $\text{C}_6\text{H}_5\text{OH}$ |

#### NEET UG 2013

23. Reaction by which Benzaldehyde cannot be prepared :-

- (1) + Zn/Hg and conc. HCl
- (2) +  $\text{CrO}_2\text{Cl}_2$  in  $\text{CS}_2$  followed by  $\text{H}_3\text{O}^+$
- (3) +  $\text{H}_2$  in presence of Pd+ $\text{BaSO}_4$
- (4) + CO+HCl in presence of anhydrous  $\text{AlCl}_3$

#### AIPMT 2014

24. Among the following sets of reactants which one produces anisole?

- (1)  $\text{CH}_3\text{CHO}$  ;  $\text{RMgX}$
- (2)  $\text{C}_6\text{H}_5\text{OH}$  ;  $\text{NaOH}$  ;  $\text{CH}_3\text{I}$
- (3)  $\text{C}_6\text{H}_5\text{OH}$  ; neutral  $\text{FeCl}_3$
- (4)  $\text{C}_6\text{H}_5 - \text{CH}_3$  ;  $\text{CH}_3\text{COCl}$ ;  $\text{AlCl}_3$

25. Which of the following will not be soluble in sodium hydrogen carbonate?

- (1) 2, 4, 6-trinitrophenol
- (2) Benzoic acid
- (3) o-Nitrophenol
- (4) Benzenesulphonic acid

#### AIPMT 2015

26. An organic compound 'X' having molecular formula  $\text{C}_5\text{H}_{10}\text{O}$  yields phenyl hydrazone and gives negative response to the Iodoform test and Tollen's test. It produces n-pentane on reduction. 'X' could be :-

- |                    |                 |
|--------------------|-----------------|
| (1) 2-pentanone    | (2) 3-pentanone |
| (3) n-amyl alcohol | (4) pentanal    |

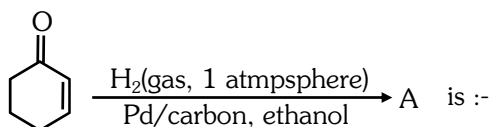
**RE-AIPMT 2015**

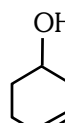
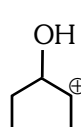
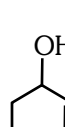
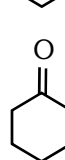
27. Reaction of phenol with chloroform in presence of dilute sodium hydroxide finally introduces which one of the following functional group ?

- (1)  $-\text{CHCl}_2$  (2)  $-\text{CHO}$   
 (3)  $-\text{CH}_2\text{Cl}$  (4)  $-\text{COOH}$

**NEET-II 2016**

28. The **correct** structure of the product A formed in the reaction



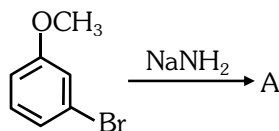
- (1)   
 (2)   
 (3)   
 (4) 

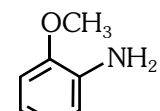
**NEET(UG) 2017**

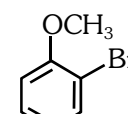
29. The heating of phenyl-methyl ethers with HI produces

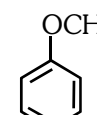
- (1) iodobenzene (2) phenol  
 (3) benzene (4) ethyl chlorides

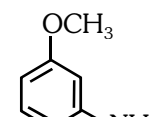
30. Identify A and predict the type of reaction



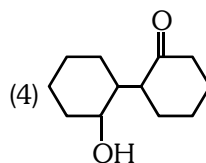
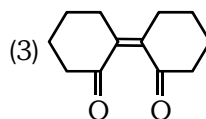
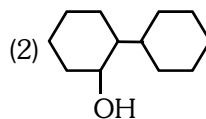
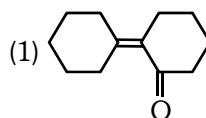
- (1)  and elimination addition reaction

- (2)  and cine substitution reaction

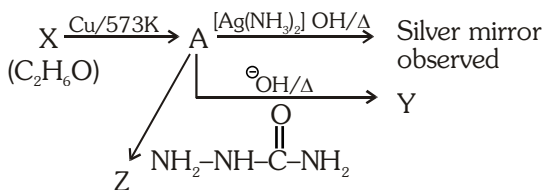
- (3)  and cine substitution reaction

- (4)  and substitution reaction

31. Of the following, which is the product formed when cyclohexanone undergoes aldol condensation followed by heating ?



**32.** Consider the reactions :-



Identify A, X, Y and Z

- (1) A-Methoxymethane, X-Ethanol, Y-Ethanoic acid, Z-Semicarbazide.
- (2) A-Ethanal, X-Ethanol, Y-But-2-enal, Z-Semicarbazone
- (3) A-Ethanol, X-Acetaldehyde, Y-Butanone, Z-Hydrazone
- (4) A-Methoxymethane, X-Ethanoic acid, Y-Acetate ion, Z-hydrazine

**NEET(UG) 2018**

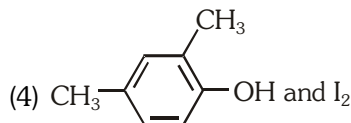
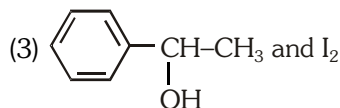
**33.** Carboxylic acid have higher boiling points than aldehydes, ketones and even alcohols of comparable molecular mass. It is due to their

- (1) formation of intramolecular H-bonding
- (2) formation of carboxylate ion
- (3) more extensive association of carboxylic acid via van der Waals force of attraction
- (4) formation of intermolecular H-bonding.

**34.** Compound A,  $\text{C}_8\text{H}_{10}\text{O}$ , is found to react with NaOI (produced by reacting Y with NaOH) and yields a yellow precipitate with characteristic smell.

A and Y are respectively

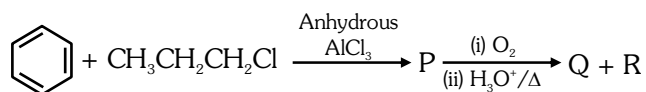
- (1)  $\text{H}_3\text{C}-\text{C}_6\text{H}_4-\text{CH}_2-\text{OH}$  and  $\text{I}_2$
- (2)  $\text{C}_6\text{H}_5-\text{CH}_2-\text{CH}_2-\text{OH}$  and  $\text{I}_2$

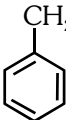
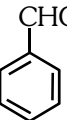
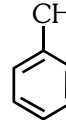
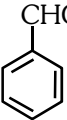
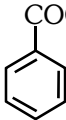
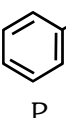
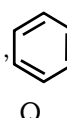
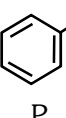
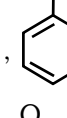


**35.** The compound A on treatment with Na gives B, and with  $\text{PCl}_5$  gives C. B and C react together to give diethyl ether. A, B and C are in the order

- (1)  $\text{C}_2\text{H}_5\text{OH}$ ,  $\text{C}_2\text{H}_6$ ,  $\text{C}_2\text{H}_5\text{Cl}$
- (2)  $\text{C}_2\text{H}_5\text{OH}$ ,  $\text{C}_2\text{H}_5\text{Cl}$ ,  $\text{C}_2\text{H}_5\text{ONa}$
- (3)  $\text{C}_2\text{H}_5\text{Cl}$ ,  $\text{C}_2\text{H}_6$ ,  $\text{C}_2\text{H}_5\text{OH}$
- (4)  $\text{C}_2\text{H}_5\text{OH}$ ,  $\text{C}_2\text{H}_5\text{ONa}$ ,  $\text{C}_2\text{H}_5\text{Cl}$

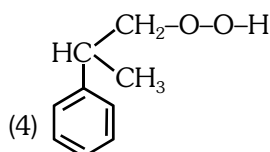
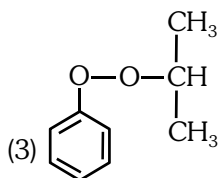
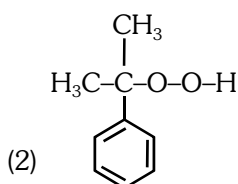
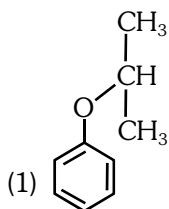
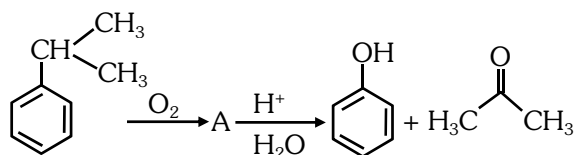
**36.** Identify the major products P, Q and R in the following sequence of reaction :



- (1)  ,  ,  $\text{CH}_3\text{CH}_2\text{-OH}$   
P Q R
- (2)  ,  ,   
P Q R
- (3)  ,  ,  $\text{CH}_3\text{CH(OH)CH}_3$   
P Q R
- (4)  ,  ,  $\text{CH}_3\text{-CO-CH}_3$   
P Q R

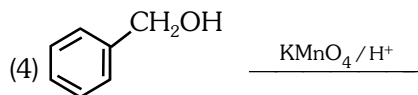
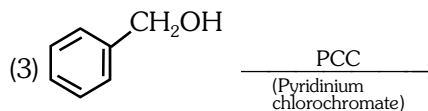
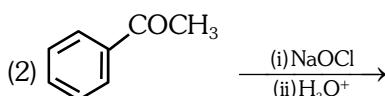
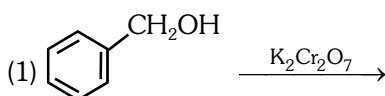
**NEET(UG) 2019**

37. The structure of intermediate A in the following reaction is :-



**NEET(UG) 2019 (ODISHA)**

38. The reaction that **does not** give benzoic acid as the major product is :-



**CA0219**

39. When vapours of a secondary alcohol is passed over heated copper at 573 K, the product formed is :-

- (1) a carboxylic acid      (2) an aldehyde  
(3) a ketone                (4) an alkene

**CC0220**

40. The major products C and D formed in the following reactions respectively are :-



- (1)  $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{I}$  and  $\text{I}-\text{C}(\text{CH}_3)_3$   
(2)  $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$  and  $\text{I}-\text{C}(\text{CH}_3)_3$   
(3)  $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{I}$  and  $\text{HO}-\text{C}(\text{CH}_3)_3$   
(4)  $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{OH}$  and  $\text{HO}-\text{C}(\text{CH}_3)_3$

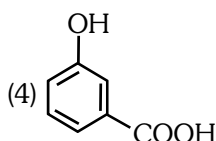
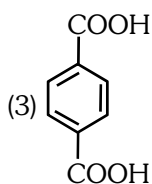
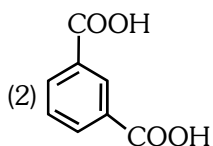
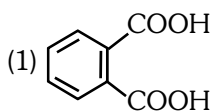
**NEET(UG) 2020**

41. Reaction between benzaldehyde and acetophenone in presence of dilute NaOH is known as :

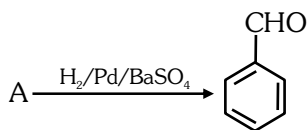
- (1) Cross Aldol condensation  
(2) Aldol condensation  
(3) Cannizzaro's reaction  
(4) Cross Cannizzaro's reaction

### NEET(UG) 2020 (COVID-19)

42. Which of the following acid will form an (a) Anhydride on heating and (b) Acid imide on strong heating with ammonia ?



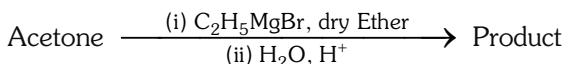
43. Identify compound (A) in the following reaction :



- (1) Benzoyl chloride  
(2) Toluene  
(3) Acetophenone  
(4) Benzoic acid

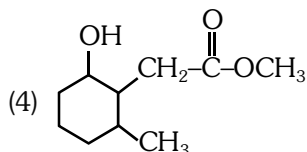
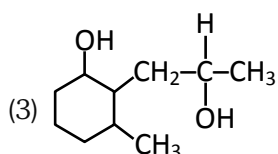
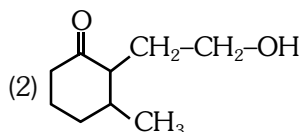
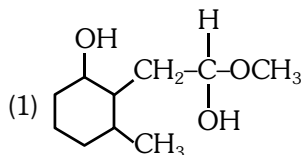
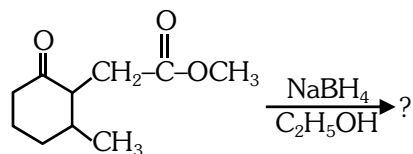
### NEET(UG) 2021

44. What is the IUPAC name of the organic compound formed in the following chemical reaction ?



- (1) 2-methyl propan-2-ol  
(2) pentan-2-ol  
(3) pentan-3-ol  
(4) 2-methyl butan-2-ol

45. The product formed in the following chemical reaction is



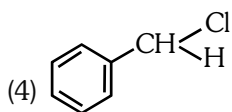
46. Match **List-I** with **List-II**.

List-I	List-II
(a) $\xrightarrow[\text{Anhyd. AlCl}_3/CuCl]{CO, HCl}$	(i) Hell-Volhard-Zelinsky reaction
(b) $R-\overset{\overset{O}{\parallel}}{C}-CH_3 + NaOX \longrightarrow$	(ii) Gattermann-Koch Reaction
(c) $R-CH_2-OH + R'COOH \xrightarrow{\text{Conc. } H_2SO_4}$	(iii) Haloform reaction
(d) $R-CH_2-COOH \xrightarrow[\text{(ii) } H_2O]{\text{(i) } X_2/Red P}$	(iv) Esterification

Choose the **correct** answer from the options given below.

- (1) (a)-(iv), (b)-(i), (c)-(ii), (d)-(iii)  
(2) (a)-(iii), (b)-(ii), (c)-(i), (d)-(iv)  
(3) (a)-(i), (b)-(iv), (c)-(iii), (d)-(ii)  
(4) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)



$$\text{C}_6\text{H}_5\text{CH}_3 + \text{CrO}_2\text{Cl}_2 \xrightarrow{\text{CS}_2} \text{X} \xrightarrow{\text{H}_3\text{O}^+} \text{C}_6\text{H}_5\text{CHO}$$


<b>Que.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Ans.</b>	3	1	1	3	1	1	1	1	4	1	3	4	2	2	3
<b>Que.</b>	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
<b>Ans.</b>	2	1	1	2	1	4	3	1	2	3	2	2	4	2	4
<b>Que.</b>	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
<b>Ans.</b>	1	2	4	3	4	4	2	3	3	1	1	1	1	4	4
<b>Que.</b>	46	47													
<b>Ans.</b>	4	1													