

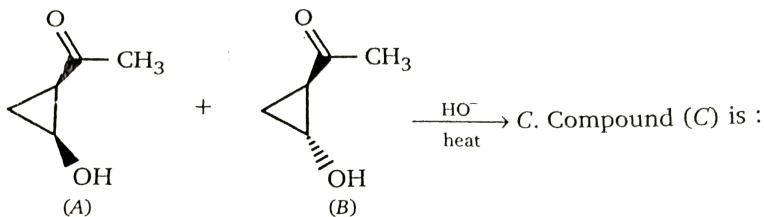
## CHEMISTRY

### BOOKS - MS CHOUHAN CHEMISTRY (HINGLISH)

### ALDOL AND CANNIZARO REACTION

#### Exercise

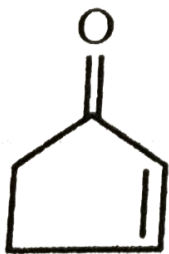
1. Compound A and B, both were treated with  $NaOH$ , producing a single compound C.



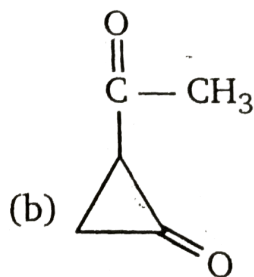
Compound C

is:

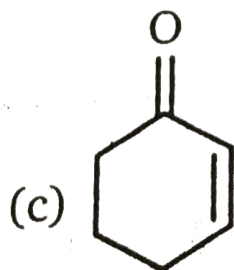
A. (a)



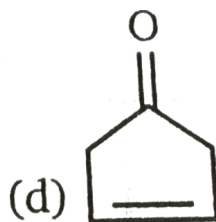
B.



C.



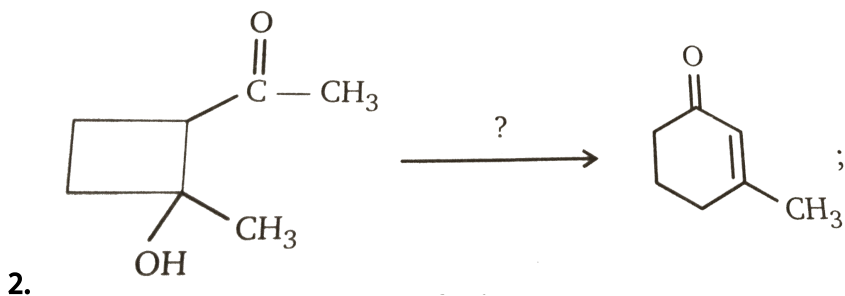
D.



**Answer: A**



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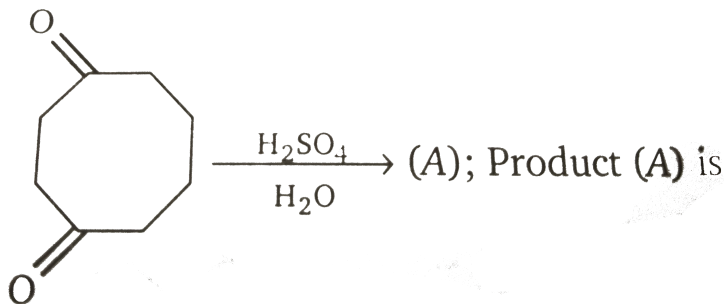
this conversion can be achieved by:

- A. Dehydration, Hydrolysis
- B. Retro aldol and further condensation.
- C. Perkin condensasation & Clemmensen reduction.
- D. Clemmensen and perkin condensation.

**Answer: B**

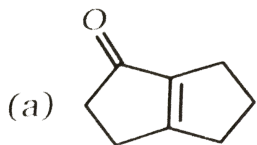


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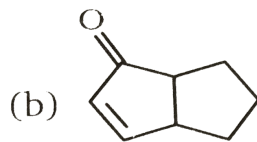


This is an example of an intermolecular aldol reaction:

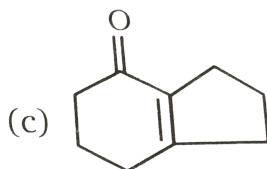
Product (A) is:



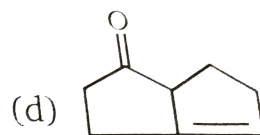
A.



B.



C.



D.

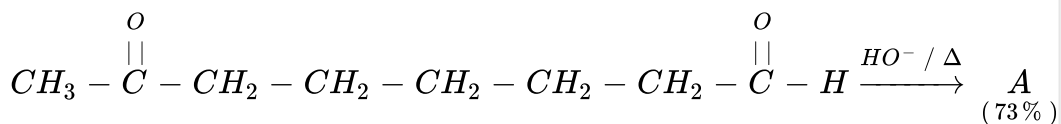


Answer: A

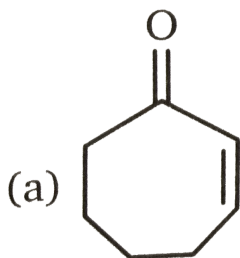


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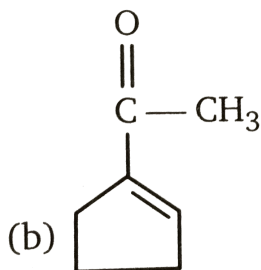
4.



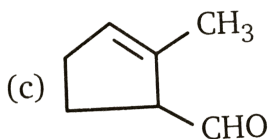
, product (A) is:



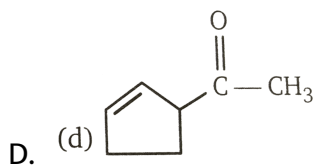
A.



B.

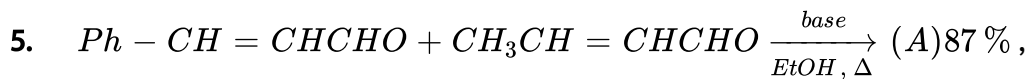


C.

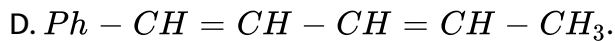
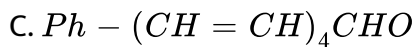
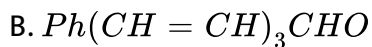
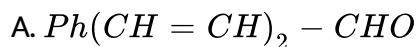


**Answer: B**

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product of this reaction is:



**Answer: B**

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6.  $CH_3CHO \xrightarrow[5^\circ C]{10\% NaOH} \xrightarrow[\Delta]{H_2, Ni} (A)$ : product (A) of the reaction is,

A. propanol

B. ethanol

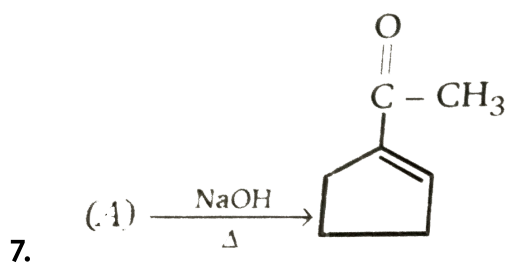
C. butanol

D. pentanol

Answer: C



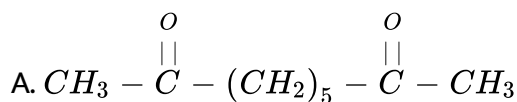
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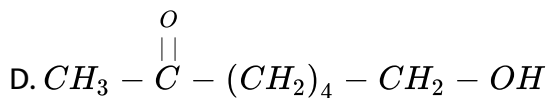
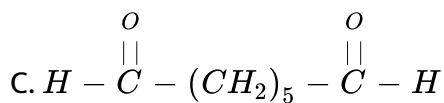
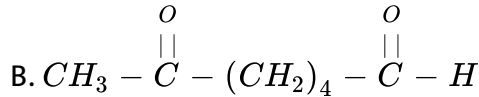


Reactant (A) is :

Reactant

(A) is,

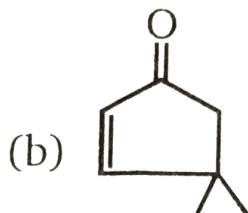
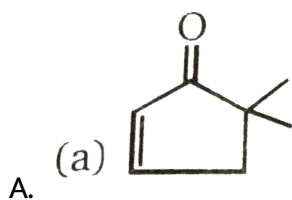
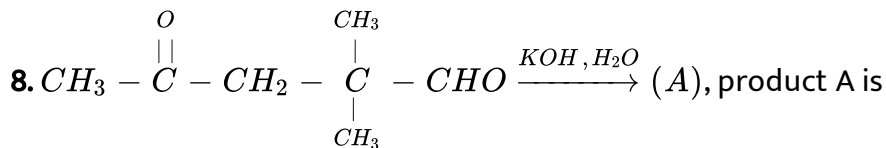




Answer: B

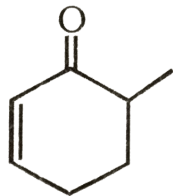


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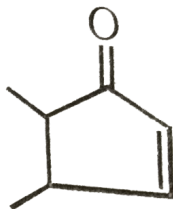
B.

(c)



C.

(d)

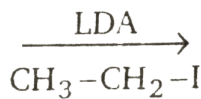
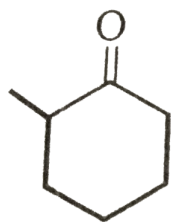


D.

Answer: B



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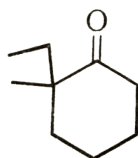
(A) ; Product A is:  
(major)

9.

is

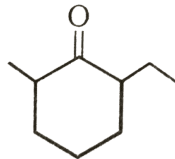
product (A)

(a)



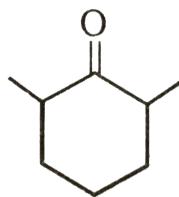
A.

(b)



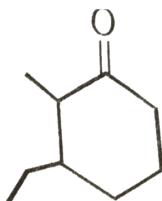
B.

(c)



C.

(d)



D.

**Answer: B**

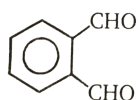


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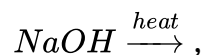
10.

the

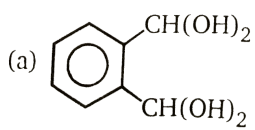
reaction



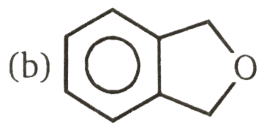
+ conc. NaOH  $\xrightarrow{\text{heat}}$ , products Identify the product.



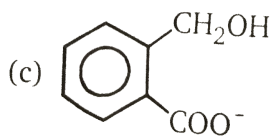
products identify the product.



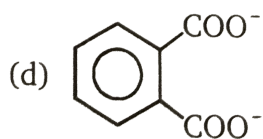
A.



B.



C.

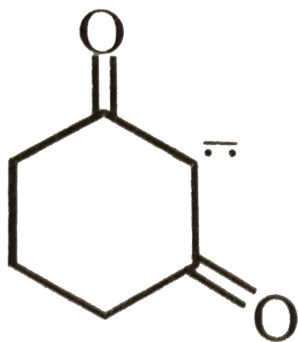


D.

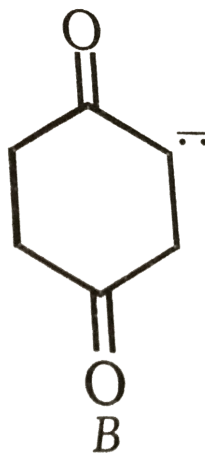
**Answer: C**



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A



B

11.

Compare enolate A with enolate B.

Which of the following statements is true?

- A. A is more stable than B
- B. A and B have the same stability.
- C. B is more stable than A
- D. No comparison of stability can be made.

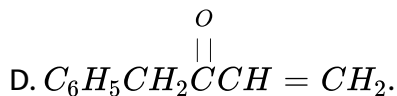
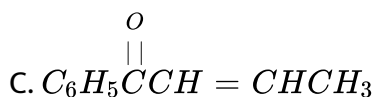
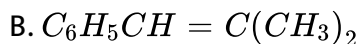
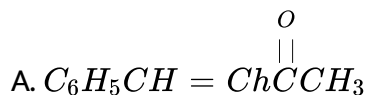
**Answer: A**



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12. Benzalacetone is the product of mixed aldol condensation between benzaldehyde ( $C_6H_5CH=O$ ) and acetone [ $(CH_3)_2C=O$ ] What is its structure.?

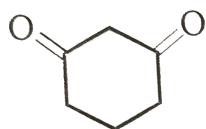


Answer: A

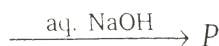
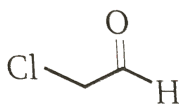


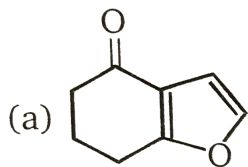
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13. Identify the major product P in the following reaction:

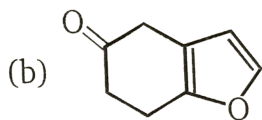


+

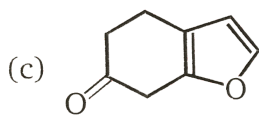




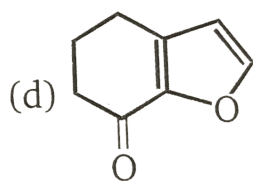
A.



B.



C.

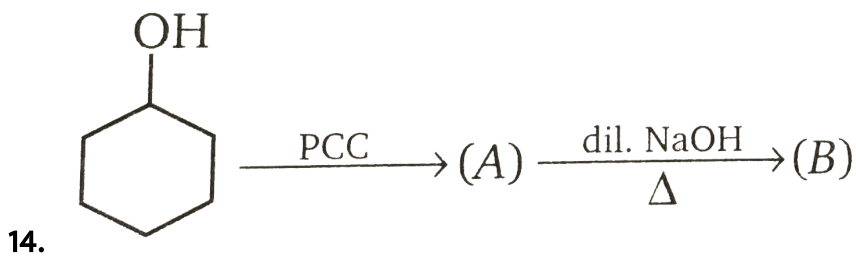


D.

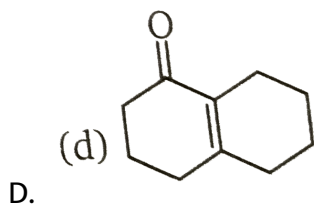
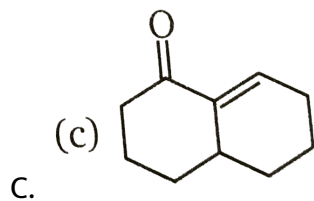
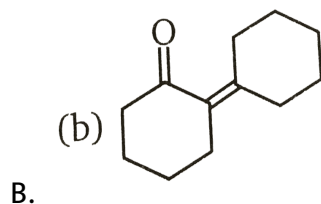
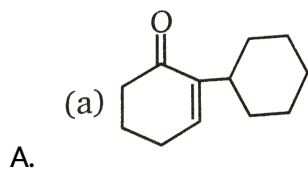
**Answer: A**



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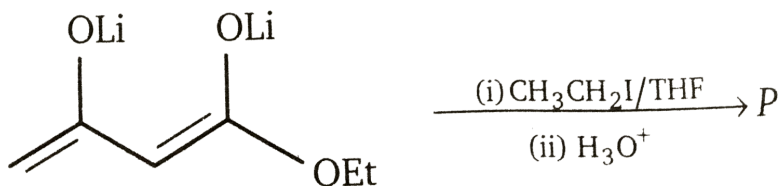
Product (B) is



**Answer: B**

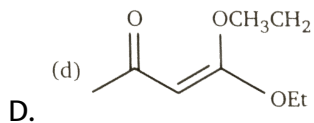
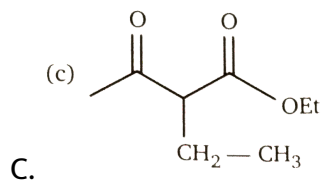
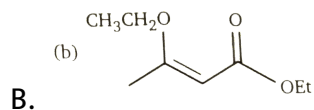
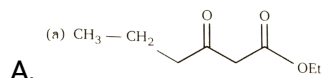


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15.

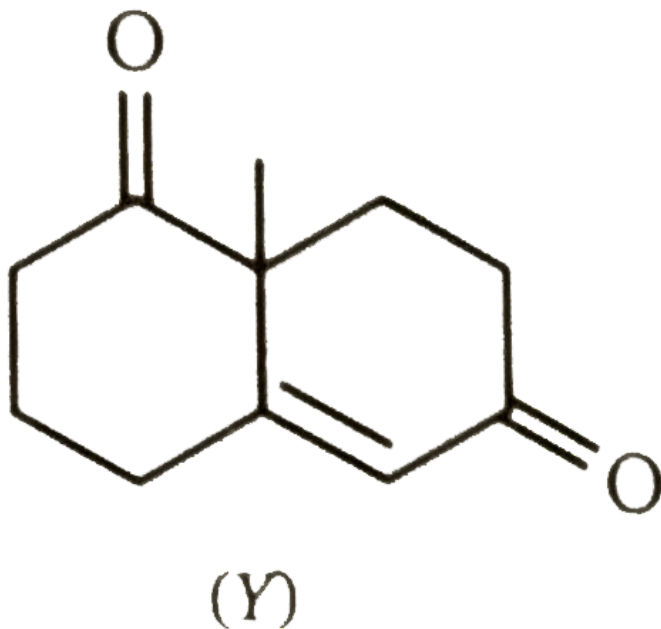
Identify the major product P in the following reaction:



Answer: A

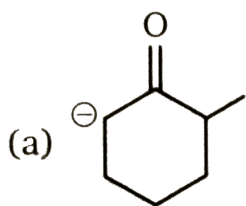


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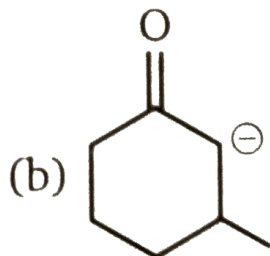


16.

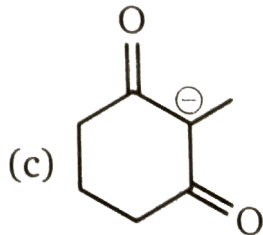
The enolate ion that reacts with 3-buten-2-one to form (Y) is:



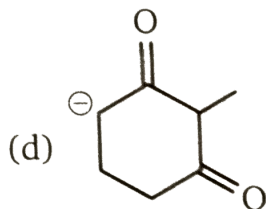
A.



B.



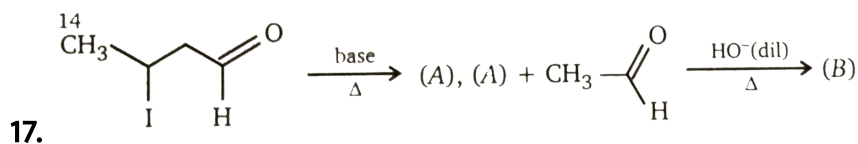
C.



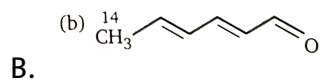
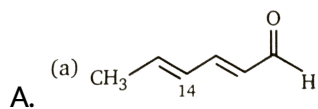
D.

**Answer: C**

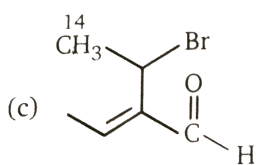
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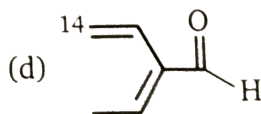
Product (B) in the above reaction is :



B.



C.

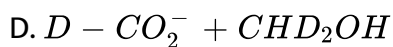
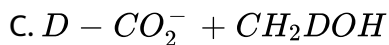
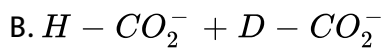
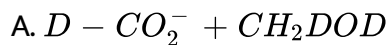


D.

**Answer: A**

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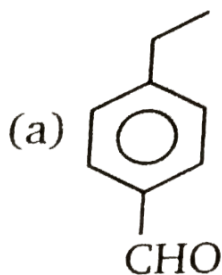
18.  $H - \overset{\overset{O}{||}}{C} - D \xrightarrow[(50\%)]{HO^-}$  product of this cannizaro reaction is



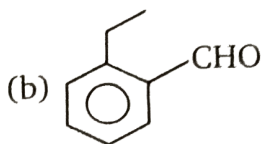
**Answer: C**

19. An organic compound with the molecular formula  $C_9H_{10}O$  forms a 2,4-DNP derivative, reduces tollen's reagent and undergoes cannizaro reaction, on vigorous oxidation it gives 1,2-benzenedicarboxylic acid.

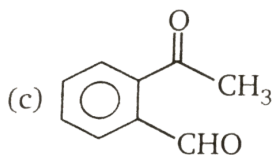
Structure of organic compound is:



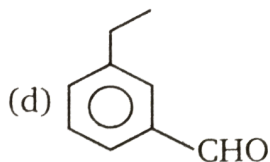
A.



B.



C.



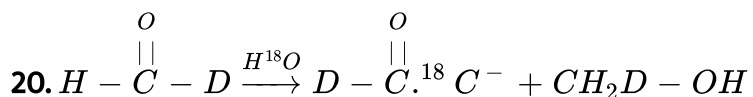
D.



**Answer: B**



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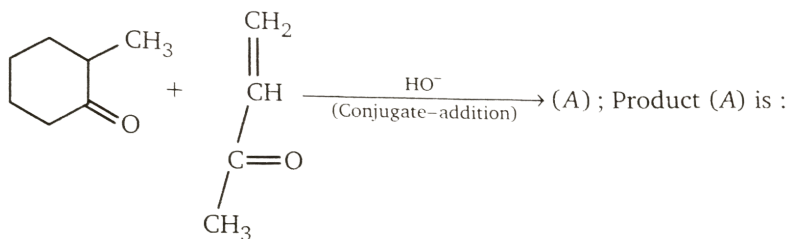
Above reaction is known as,

- A. Cannizaro reaction, Disproportionation reaction
- B. Tischenko reaction, Disproportionation reaction
- C. Cross cannizaro reaction, redox reaction.
- D. Tischenko reaction, redox reaction.

**Answer: A**



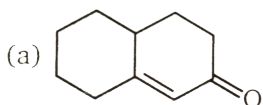
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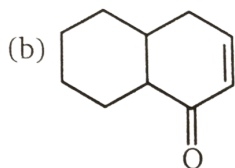
21.

product

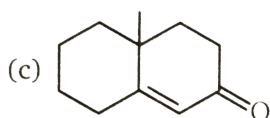
(A) is,



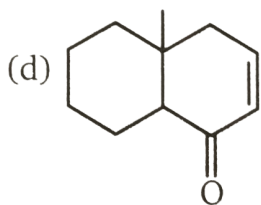
A.



B.



C.

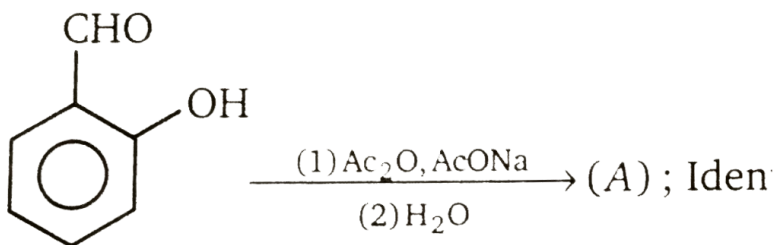


D.

Answer: C



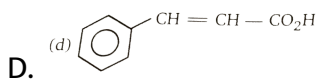
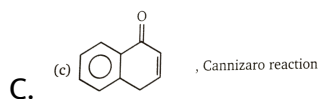
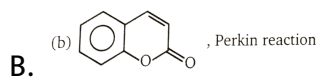
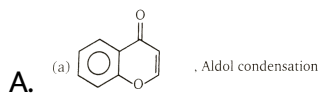
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22.

Identify

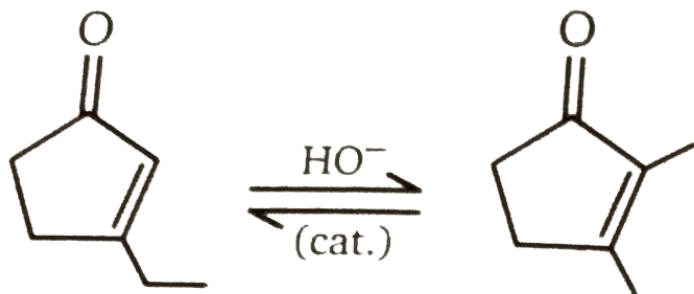
product and name of reaction.



Answer: B

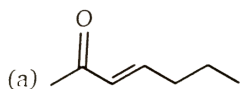


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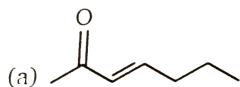


23.

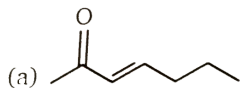
Choose the most reasonable reaction intermediate for the following reaction.



A.



B.



C.

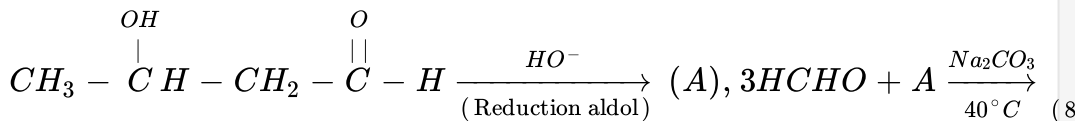
D. None of these

Answer: C

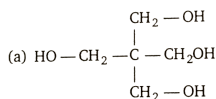


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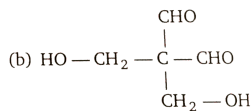
24.



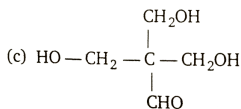
Product (B) of the above reaction is:



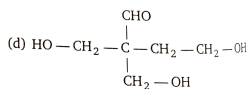
A.



B.



C.

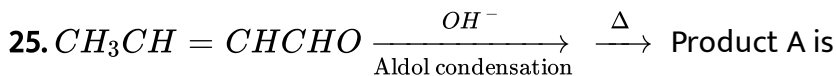


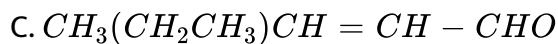
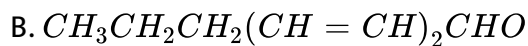
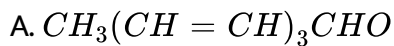
D.

Answer: C



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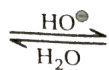
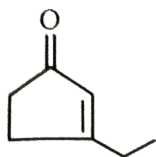


D. none is correct.

**Answer: A**



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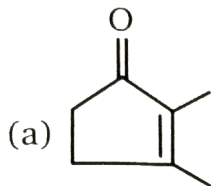


B. (A) and (B) are isomer : Identify (B) .

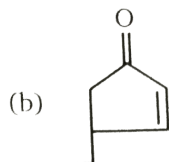
26.

(A) and (B)

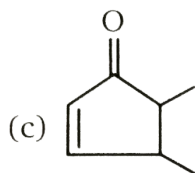
are isomer Identify (B).



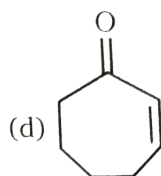
A.



B.



C.



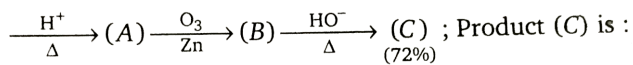
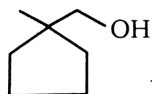
D.

Answer: A



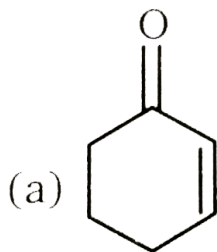
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27.

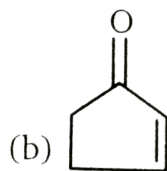


product

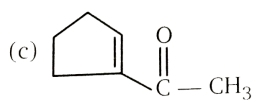
(C) is:



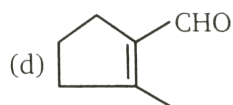
A.



B.



C.



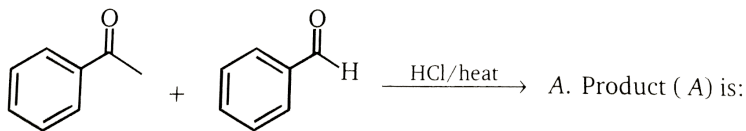
D.

**Answer: C**

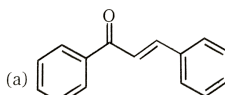
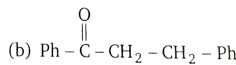
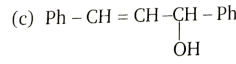
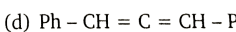


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Product (A) is:

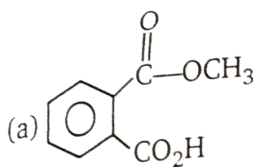
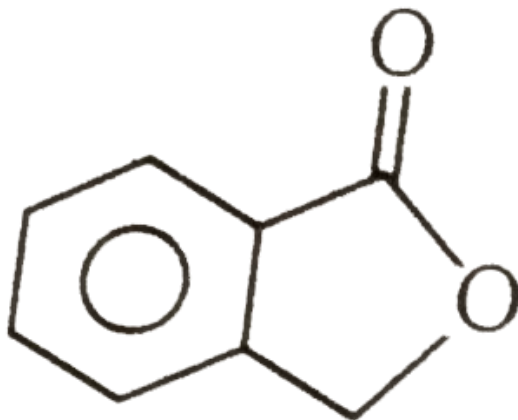
- A.  (a)
- B.  (b)  $\text{Ph}-\text{C}(=\text{O})-\text{CH}_2-\text{CH}_2-\text{Ph}$
- C.  (c)  $\text{Ph}-\text{CH}=\text{CH}-\underset{\text{OH}}{\text{CH}}-\text{Ph}$
- D.  (d)  $\text{Ph}-\text{CH}=\text{C}=\text{CH}-\text{Ph}$

**Answer: A**

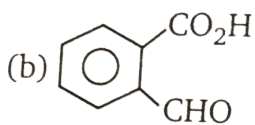


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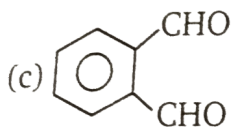
29. Which of the following reactant on reaction with conc. NaOH followed by acidification gives the following lactone as the product?



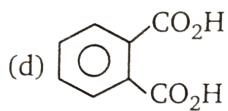
A.



B.

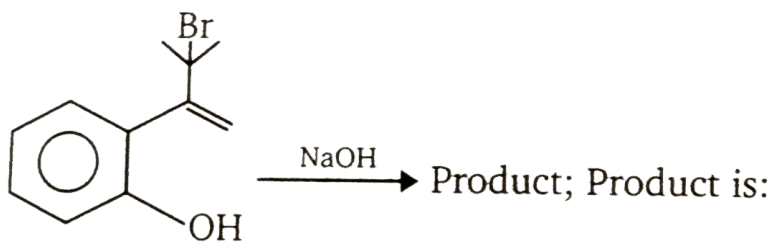


C.



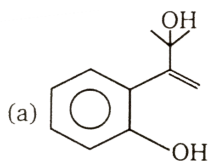
D.

**Answer: C**

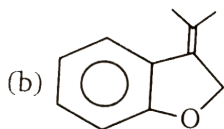


30.

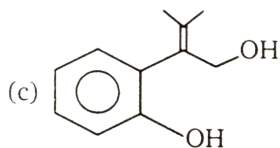
Product is:



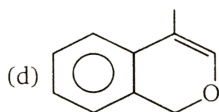
A.



B.

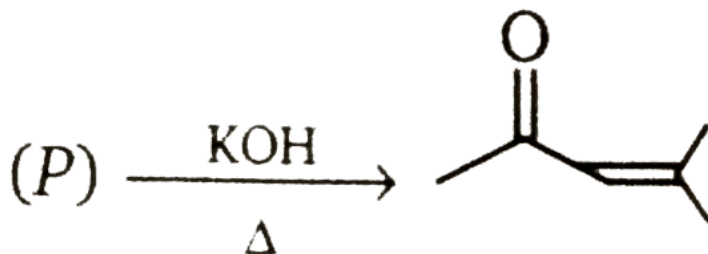


C.

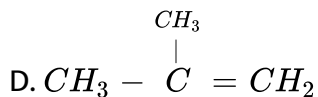
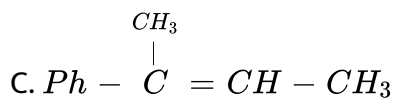
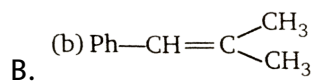
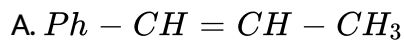


D.

Answer: B

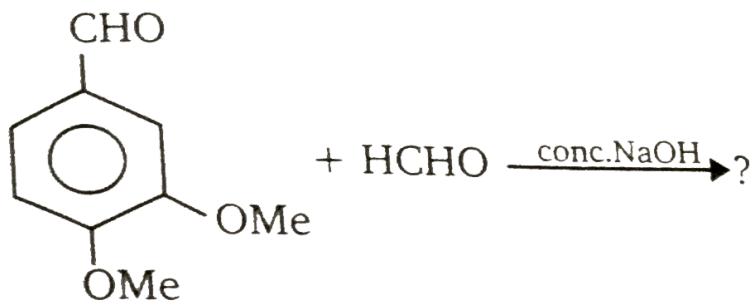
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31.



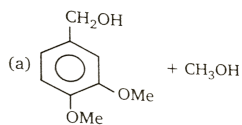
**Answer: B**

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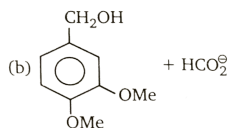


32.

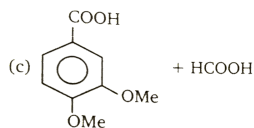
The following reaction gives:



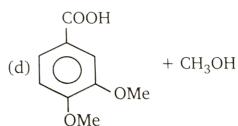
A.



B.



C.



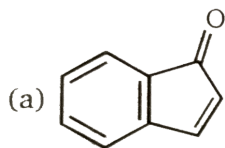
D.

Answer: B

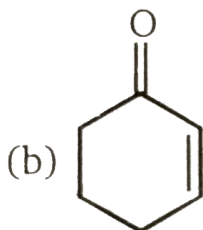


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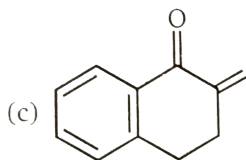
33. Which of the following is not the product of an intramolecular aldol condensation?



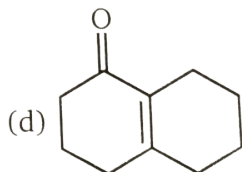
A.



B.



C.



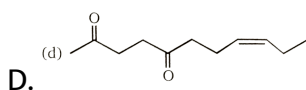
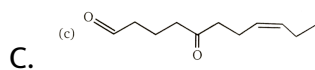
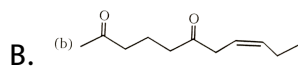
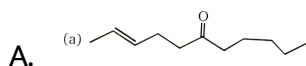
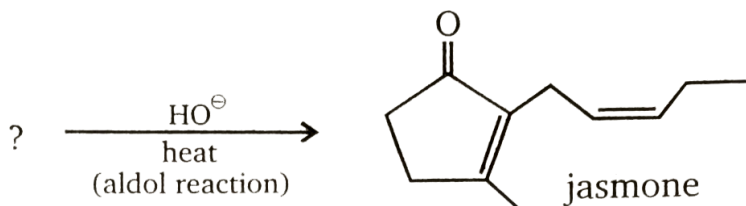
D.

Answer: C



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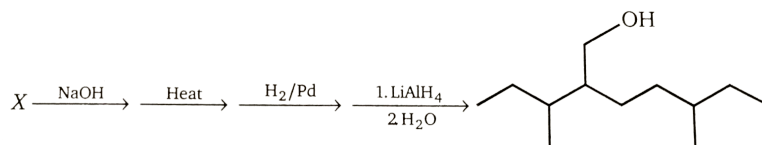
34. Choose the reactant whose aldol reaction would give jasmine.



Answer: D

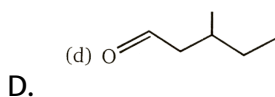
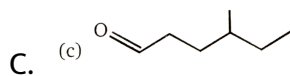
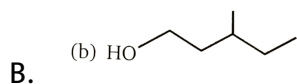
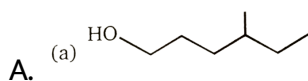


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35.

Compound X undergoes the following reaction sequence. What is the structure of compound X?

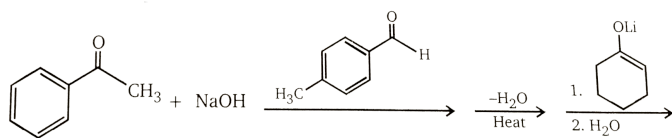


Answer: D



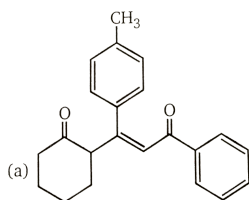
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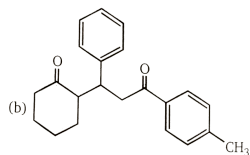


36.

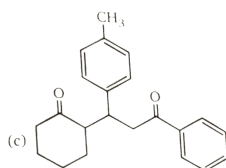
Predict the major product of the following reaction sequence.



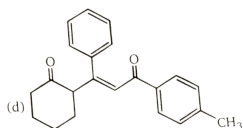
A.



B.



C.

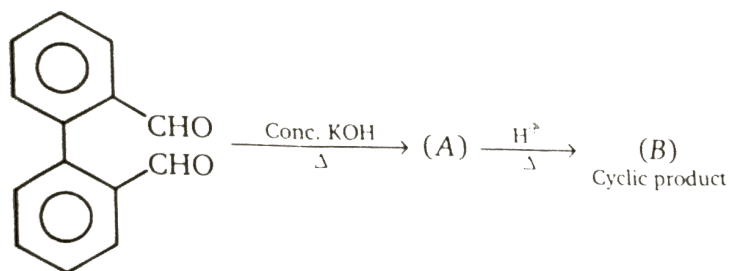


D.

Answer: C

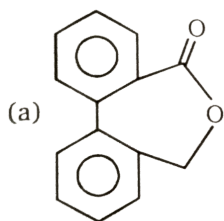


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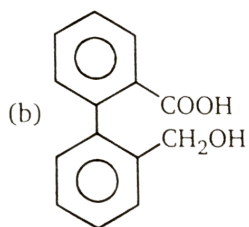


37. Structure of (B) is :

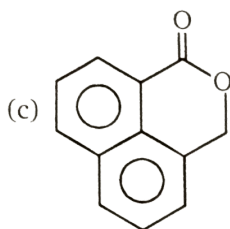
Structure of (B) is:



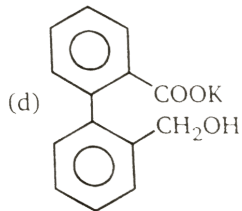
A.



B.



C.



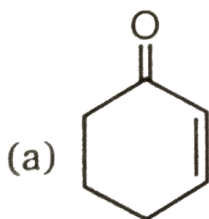
D.

**Answer: A**

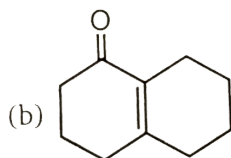


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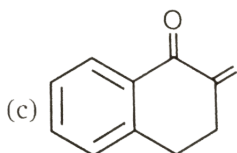
**38.** Which of the following is not the product of an intramolecular aldol condensation?



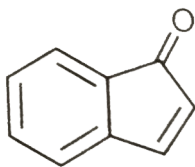
A.



B.



C.

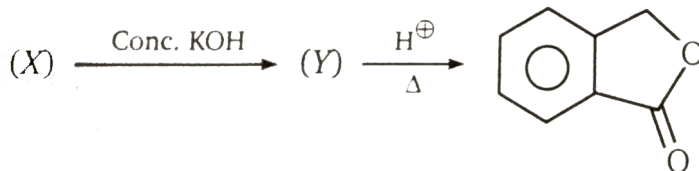


D.

Answer: C

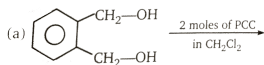


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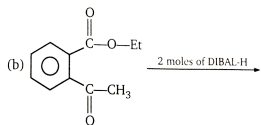


39.

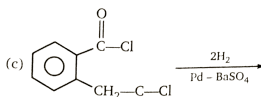
Compound (X) is obtained by which of the following reaction?



A.



B.

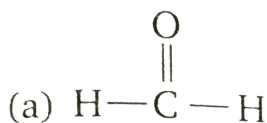


C.


$$\text{Ph}-\overset{\text{O}}{\parallel}\text{C}-\text{H} \xrightleftharpoons{\text{HO}^-} \text{Ph}-\overset{\text{O}^-}{\underset{\text{O}-\text{H}}{\text{C}}}-\text{H} + \text{O}=\text{C}-\text{Ph} \xrightarrow{\text{slow}} \text{Ph}-\overset{\text{O}}{\parallel}\text{C}-\text{OH} + \text{Ph}-\text{CH}_2-\text{O}^-$$

$$\rightleftharpoons \text{Ph}-\text{CO}_2^- + \text{Ph}-\text{CH}_2-\text{OH}$$

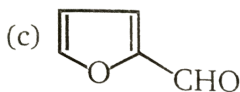
A.



**B.**



C.

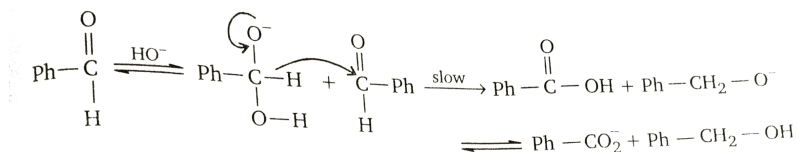


D. All of these

Answer: D

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41. Mechanism of cannizzaros reaction of benzaldehyde is



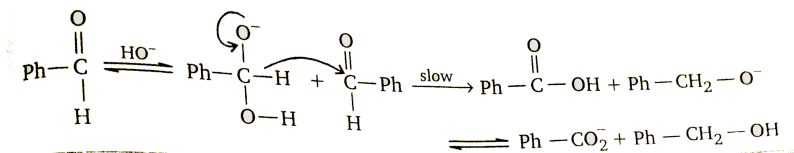
Q. Order of the above reaction is

- A. 1
- B. 2
- C. 3
- D. 4

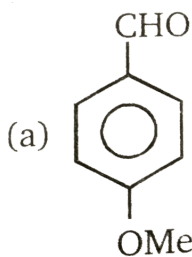
Answer: C

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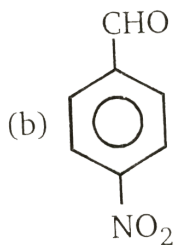
42. Mechanism of cannizzaros reaction of benzaldehyde is



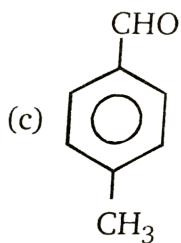
Q. Which of the following is best hydride donor in cannizaro's reaction?



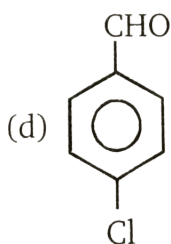
A.



B.



C.



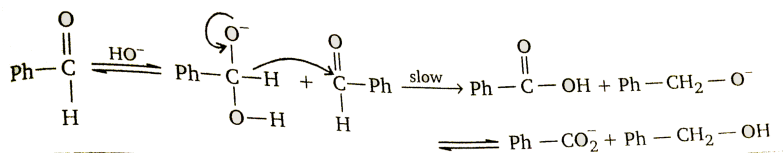
D.

**Answer: A**



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**43. Mechanism of cannizzaros reaction of benzaldehyde is**



**Q. Cannizaro's reaction is**

A. Reduction

B. Disproportionation reaction

C. Oxidation

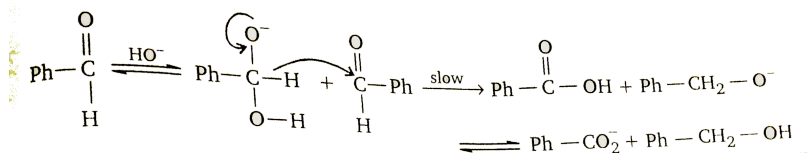
D. Ion-exchange reaction.



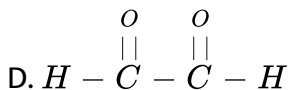
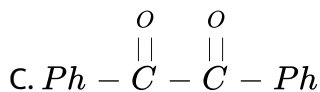
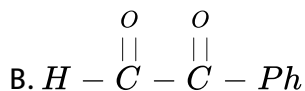
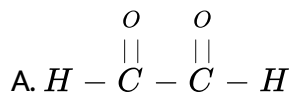
Answer: B

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44. Mechanism of cannizzaros reaction of benzaldehyde is



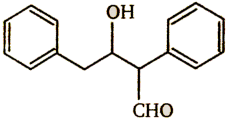
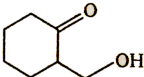
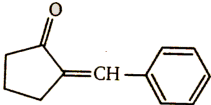
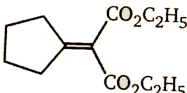
Q. Which of the following cannot undergo intramolecular cannizaro's reaction?

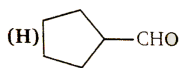
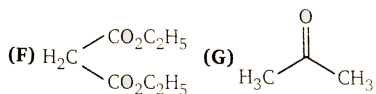
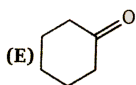
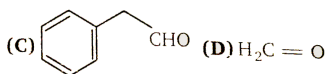
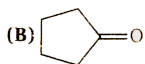
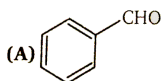


Answer: C

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**45.** Aldol condensation proceeds by carbon-carbon bond formation between an enolate donor and a carbonyl acceptor. For each of the following aldol products (a through e) select a donor and an acceptor compound from the list at the bottom of the page (compounds A through H). write the letter corresponding to your selection in the appropriate answer box.

	Aldol Product	Donor	Acceptor
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			



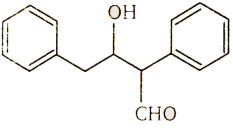
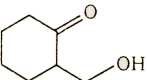
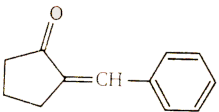
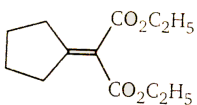
Q.

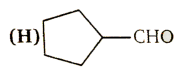
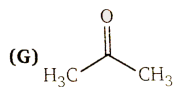
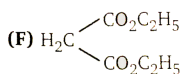
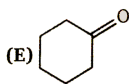
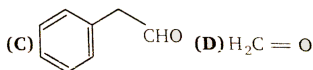
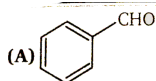


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**46.** Aldol condensation proceeds by carbon-carbon bond formation between an enolate donor and a carbonyl acceptor. For each of the following aldol products (a through e) select a donor and an acceptor compound from the list at the bottom of the page (compounds A

through H). write the letter corresponding to your selection in the appropriate answer box.

	Aldol Product	Donor	Accepto
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			



Q.



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47. During an experimental workup procedure, a chemist treated a starting material with NaOH in the solvent acetone  $[(\text{CH}_3)_2\text{C}=\text{O}]$ ,

however, the starting material was recovered unreacted. Instead, the chemist isolated a small amount of product A (shown below).

#### Product A

1. Elemental analysis of product A indicated that it consisted only of carbon, hydrogen, and oxygen.
2. Product A had a molecular weight of 116 g/mol.
3. Product A was a methyl ketone because it gave a positive iodoform test.
4. When product A was treated with  $Br_2$  in  $CCl_4$ , the red bromine colour persisted, because no carbon-carbon double bonds were present to react with the bromine.

The structure of product A was further confirmed when treatment with hot sulfuric acid resulted in the corresponding dehydration product, product (B).

Q. What is the molecular weight of a compound that undergoes an aldol self-condensation reaction to result in a  $\beta$ -hydroxy ketone with a molecular weight of 144?

A. 70g/mol

B. 72g/mol

C. 74g/mol

D. 76g/mol

**Answer: B**



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**48.** During an experimental workup procedure, a chemist treated a starting material with NaOH in the solvent acetone  $[(CH_3)_2C = O]$ , however, the starting material was recovered unreacted. Instead, the chemist isolated a small amount of product A (shown below).

Product A

1. Elemental analysis of product A indicated that it consisted only of carbon, hydrogen, and oxygen.
2. Product A had a molecular weight of 116 g/mol.
3. Product A was a methyl ketone because it gave a positive iodoform test.
4. When product A was treated with  $Br_2$  in  $CCl_4$ , the red bromine colour persisted, because no carbon-carbon double bonds were present to react with the bromine.

The structure of product A was further confirmed when treatment with hot sulfuric acid resulted in the corresponding dehydration product, product (B)

Q. The aldol self-condensation of acetone is an equilibrium that favours acetone over its condensation product. which of the following experimental modifications is most likely to shift the position of equilibrium towards product A?

- A. Using only a catalytic amount of NaOH
- B. Using only a catalytic amount of acetone
- C. Removing product A as it is formed
- D. Increasing the reaction temperature to the boiling point of acetone.

**Answer: C**



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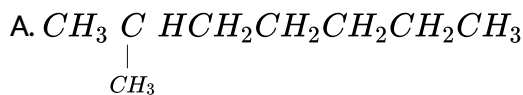
49. During an experimental workup procedure, a chemist treated a starting material with NaOH in the solvent acetone  $[(CH_3)_2C = O]$ , however, the starting material was recovered unreacted. Instead, the chemist isolated a small amount of product A (shown below).

Product A

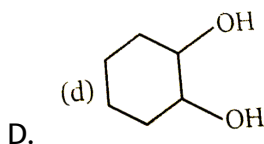
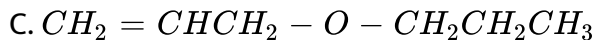
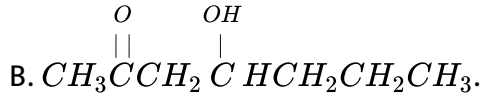
1. Elemental analysis of product A indicated that it consisted only of carbon, hydrogen, and oxygen.
2. Product A had a molecular weight of 116 g/mol.
3. Product A was a methyl ketone because it gave a positive iodoform test.
4. When product A was treated with  $Br_2$  in  $CCl_4$ , the red bromine colour persisted, because no carbon-carbon double bonds were present to react with the bromine.

The structure of product A was further confirmed when treatment with hot sulfuric acid resulted in the corresponding dehydration product, product (B)gt

Q. Based only on observation 1 and 2, which of the following compounds could have been product A?







**Answer: D**

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50. During an experimental workup procedure, a chemist treated a starting material with NaOH in the solvent acetone  $[(\text{CH}_3)_2\text{C} = \text{O}]$ , however, the starting material was recovered unreacted. Instead, the chemist isolated a small amount of product A (shown below).

Product A

1. Elemental analysis of product A indicated that it consisted only of carbon, hydrogen, and oxygen.
2. Product A had a molecular weight of 116 g/mol.
3. Product A was a methyl ketone because it gave a positive iodoform test.

4. When product A was treated with  $Br_2$  in  $CCl_4$ , the red bromine colour persisted, because no carbon-carbon double bonds were present to react with the bromine.

The structure of product A was further confirmed when treatment with hot sulfuric acid resulted in the corresponding dehydration product, product (B).

Q. When a drop of  $Br_2$  in  $CCl_4$  is added to product B, the resulting solution will be

A. colourless, because product B does not contain a carbon-carbon double bond.

B. colourless, because product B contains a carbon-carbon double bond

C. red, because product B does not contain a carbon-carbon double bond.

D. red, because product B contains a carbon-carbon double bond.

**Answer: B**



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51. During an experimental workup procedure, a chemist treated a starting material with NaOH in the solvent acetone  $[(CH_3)_2C=O]$ , however, the starting material was recovered unreacted. Instead, the chemist isolated a small amount of product A (shown below).

Product A

1. Elemental analysis of product A indicated that it consisted only of carbon, hydrogen, and oxygen.
2. Product A had a molecular weight of 116 g/mol.
3. Product A was a methyl ketone because it gave a positive iodoform test.
4. When product A was treated with  $Br_2$  in  $CCl_4$ , the red bromine colour persisted, because no carbon-carbon double bonds were present to react with the bromine.

The structure of product A was further confirmed when treatment with hot sulfuric acid resulted in the corresponding dehydration product, product (B).

Q. Which of the following compounds from the passage will give a positive iodoform test?

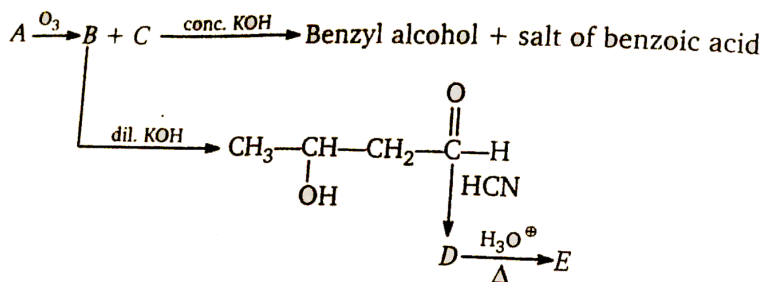
A. Product A only

- B. Product A and product B
- C. Product A and acetone only
- D. Product A, product B, and acetone.

Answer: D

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52.



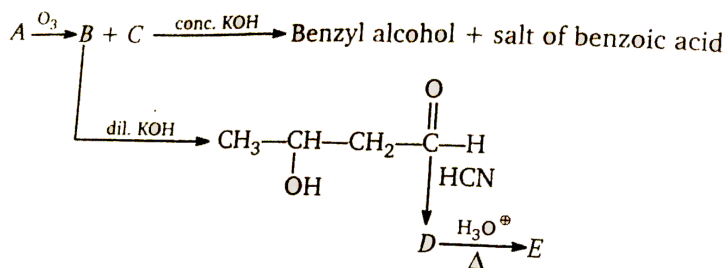
Q. Structure of A is:

- A.  $\text{H}_2\text{C} = \text{CH} - \text{CHO}$
- B.  $\text{Ph} - \text{CH} = \text{CH} - \text{CH}_3$
- C.  $\text{Ph} - \underset{\text{CH}_3}{\text{C}} = \text{CH}_2$
- D.  $\text{Ph} - \text{CH} = \underset{\text{CH}_3}{\text{C}} - \text{CH}_3$

**Answer: B**



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**53.**

Q. Structure of (B) and (C) differentiated By,

### A. Tollen's reagent

### B. Fehling solution

### C. 2,4-DNP

D.  $NaHSO_3$ 

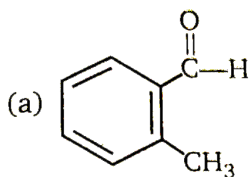
**Answer: B**



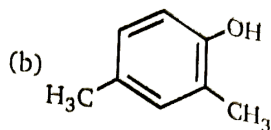
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54. An organic compound 'P' with molecular formula  $C_8H_8O$  forms an organic red ppt with 2, 4 – *DNP* gives yellow ppt. on heating with  $I_2$  in presence of  $NaOH$ . It neither reduces tollen's or fehling reagent nor does it decolourise  $Br_2$  water or baeyer's reagent. On drastic oxidation with chromic acid ( $H_2CrO_4$ ) it gives an acid (Q) having molecular formula  $C_7H_6O_2$ .

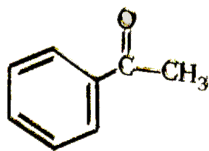
Q. Identify compound P:



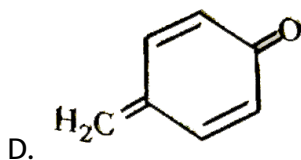
A.



B.



C.



D.

Answer:

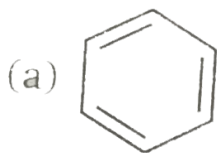


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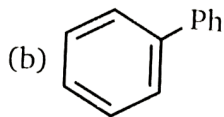
55. An organic compound 'P' with molecular formula  $C_8H_8O$  forms an organic red ppt with 2, 4 - *DNP* gives yellow ppt. on heating with  $I_2$  in presence of  $NaOH$ . It neither reduces tollen's or fehling reagent nor does it decolourise  $Br_2$  water or baeyer's reagent. On drastic oxidation with chromic acid ( $H_2CrO_4$ ) it gives an acid (Q) having molecular formula  $C_7H_6O_2$ .

Q.  $Q \xrightarrow{NaOH / CaO / \Delta} R$  (Major product).

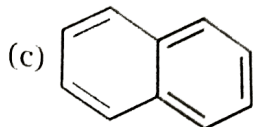
R will be,



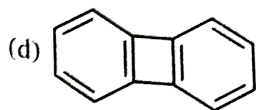
A.



B.



C.



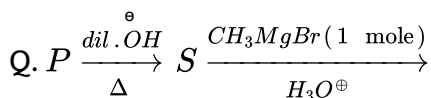
D.

**Answer: C**



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**56.** An organic compound 'P' with molecular formula  $C_8H_8O$  forms an organic red ppt with 2, 4 – *DNP* gives yellow ppt. on heating with  $I_2$  in presence of  $NaOH$ . It neither reduces tollen's or fehling reagent nor does it decolourise  $Br_2$  water or baeyer's reagent. On drastic oxidation with chromic acid ( $H_2CrO_4$ ) it gives an acid (Q) having molecular formula  $C_7H_6O_2$ .



No. of stereoisomer in the final product T:

A. 2



B. 3

C. 4

D. 6

Answer:

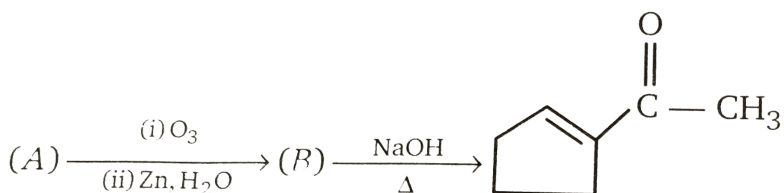


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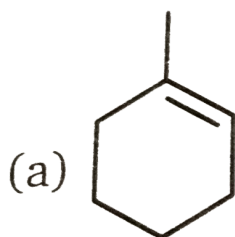
Level 1 Q 1 To Q 30

1.

reactant (A) will be

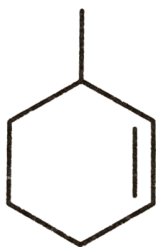


the



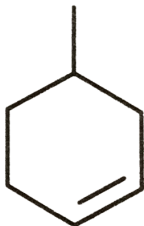
A.

(b)



B.

(c)



C.

(d)

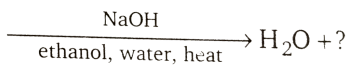
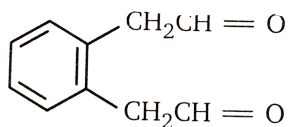


D.

**Answer: A**

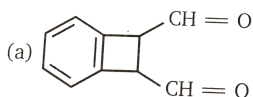


**View Text Solution**

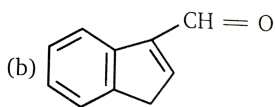


2.

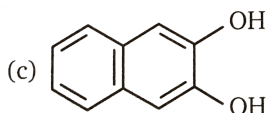
Identify the principal product of the following reaction?



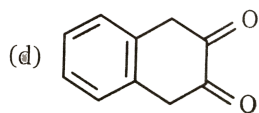
A.



B.



C.



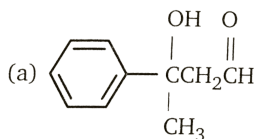
D.

**Answer: B**

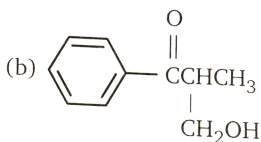


**View Text Solution**

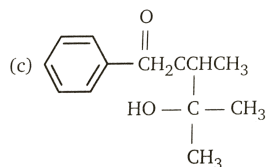
3. Which one of the following compounds is the best choice for being prepared by an efficient mixed aldol addition reaction.



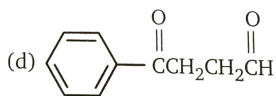
A.



B.



C.



D.

Answer: B



View Text Solution

4. 

Number of intramolecular aldol condensation product is:

A. 1

B. 2

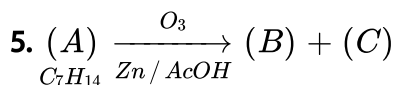
C. 3

D. 4

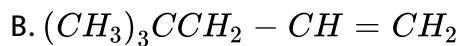
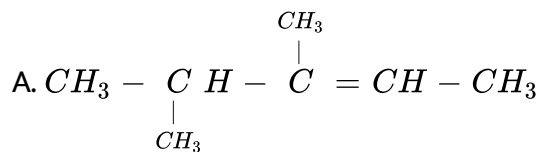
Answer: C

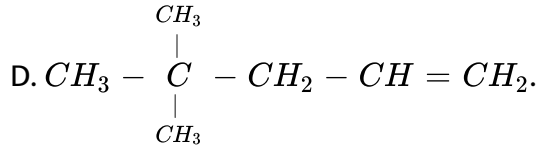


View Text Solution



Compound (A) exist in geometrical isomers and (B) gives cannizaro reaction. (A) will be

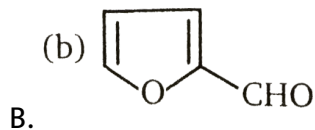
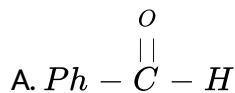




Answer: C

 [View Text Solution](#)

6. Which of the following compounds will not undergo cannizaro reaction, when treated with 50% aqueous alkali?



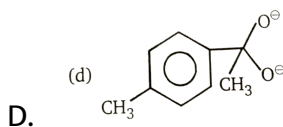
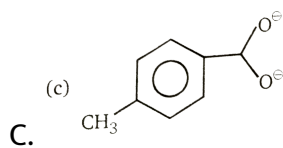
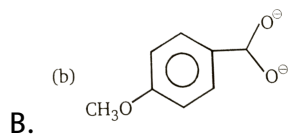
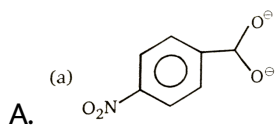
B.



Answer: D

 [View Text Solution](#)

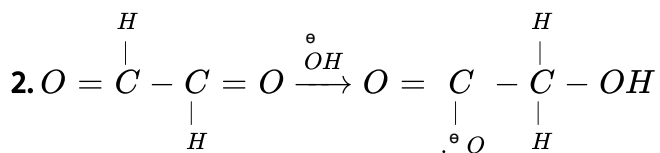
1.  $x$  = no of compound better hydride donor than  $Ph - \overset{\overset{O^\ominus}{|}}{\underset{\underset{H}{|}}{C}} - O^\ominus$



Answer: B::C



View Text Solution



Given reaction is cannizaro reaction at normal concentration of base.

Predict the order of above reaction.

A. 1

B. 2

C. 3

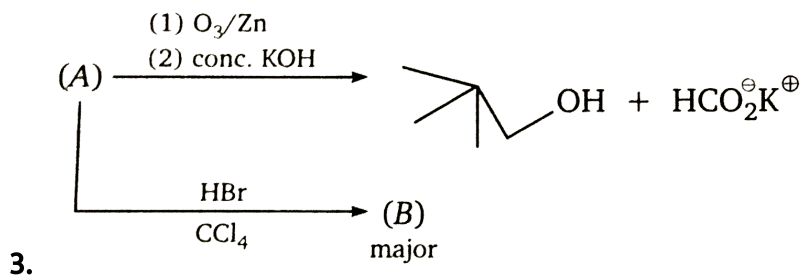
D. 4

**Answer: B**

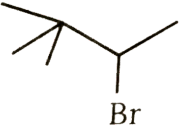
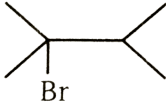
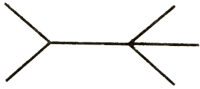
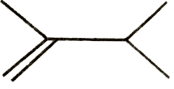


**View Text Solution**





Product (B) is,

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

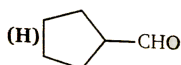
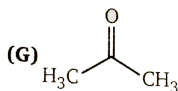
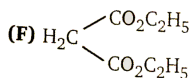
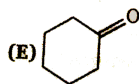
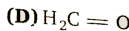
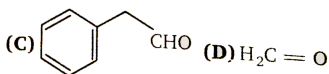
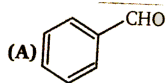
Answer: B



View Text Solution

1. Aldol condensation proceeds by carbon-carbon bond formation between an enolate donor and a carbonyl acceptor. For each of the following aldol products (a through e) select a donor and an acceptor compound from the list at the bottom of the page (compounds A through H). write the letter corresponding to your selection in the appropriate answer box.

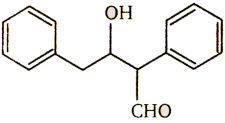
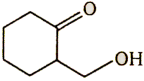
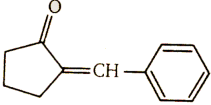
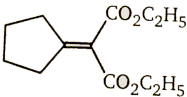
	Aldol Product	Donor	Acceptor
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			

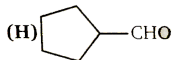
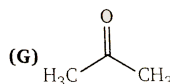
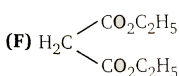
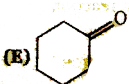
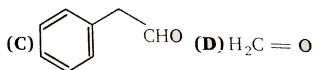
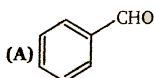


View Text Solution

2. Aldol condensation proceeds by carbon-carbon bond formation between an enolate donor and a carbonyl acceptor. For each of the following aldol products (a through e) select a donor and an acceptor compound from the list at the bottom of the page (compounds A

through H). write the letter corresponding to your selection in the appropriate answer box.

	Aldol Product	Donor	Acceptor
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			



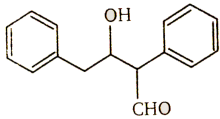
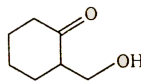
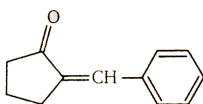
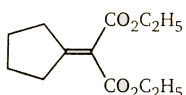
Q.

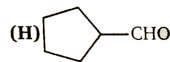
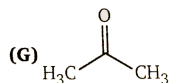
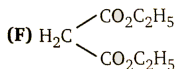
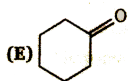
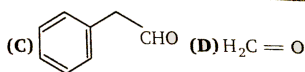
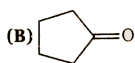
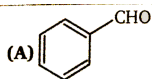


View Text Solution

3. Aldol condensation proceeds by carbon-carbon bond formation between an enolate donor and a carbonyl acceptor. For each of the following aldol products (a through e) select a donor and an acceptor

compound from the list at the bottom of the page (compounds A through H). write the letter corresponding to your selection in the appropriate answer box.

	Aldol Product	Donor	Acceptor
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			



Q.



View Text Solution

4. Aldol condensation proceeds by carbon-carbon bond formation between an enolate donor and a carbonyl acceptor. For each of the

following aldol products (a thorough) select a donor and an acceptor compound from the list at the bottom of the page (compounds A through H). write the letter corresponding to your selection in the appropriate answer box.

through H. Write the letter corresponding to your selection in the appropriate space.

	Aldol Product	Donor	Acceptor
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			

through H. Write the letter corresponding to your selection in the appropriate space.

	Aldol Product	Donor	Acceptor
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			

Q.



View Text Solution

5. Aldol condensation proceeds by carbon-carbon bond formation between an enolate donor and a carbonyl acceptor. For each of the following aldol products (a through e) select a donor and an acceptor compound from the list at the bottom of the page (compounds A through H). write the letter corresponding to your selection in the appropriate answer box.

	Aldol Product	Donor	Acceptor
a.			
b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			

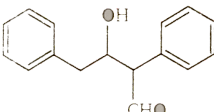
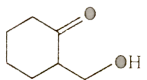
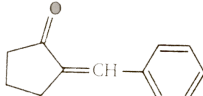
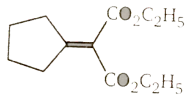
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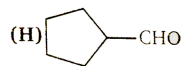
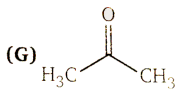
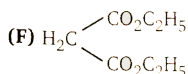
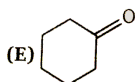
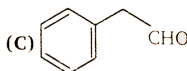
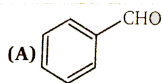


View Text Solution



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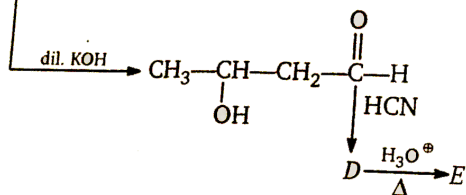
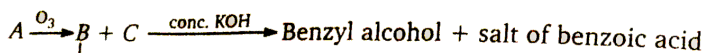
	Aldol Product	Donor	Acceptor
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b.			
c.			
d.	$(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{COCH}_3$		
e.			



Q.

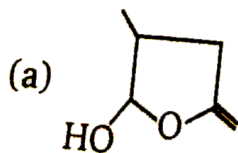


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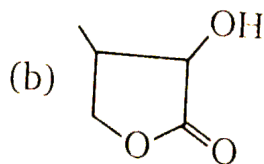


7.

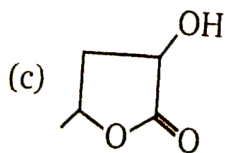
Q. Structure of E is:



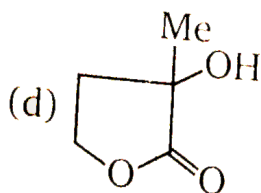
A.



B.



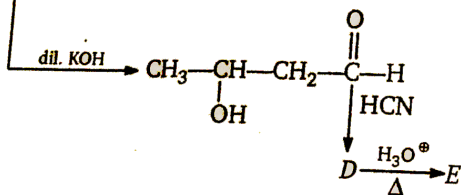
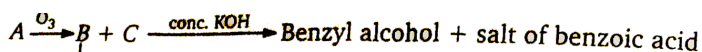
C.



D.

Answer: C

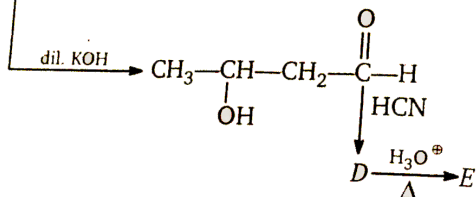
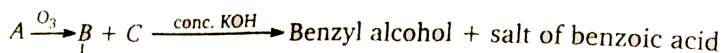
 View Text Solution



8.

Q.

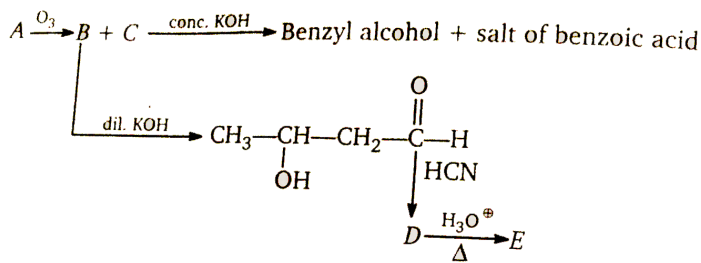
 View Text Solution



9.

Q.

 View Text Solution



10.

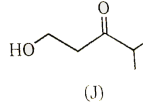
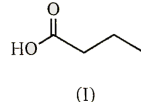
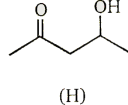
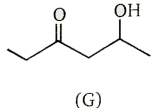
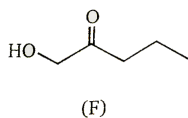
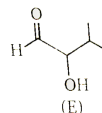
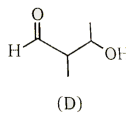
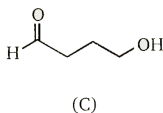
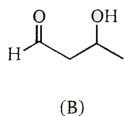
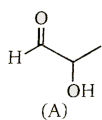
Q.



View Text Solution

## Subjective Problems

1.



1.

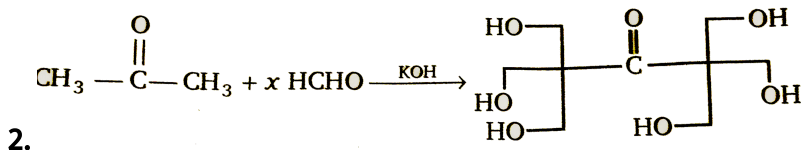
X=number of compound obtained by aldol reaction

Y=Number of compounds react with  $NaHCO_3$

Sum of X+Y is



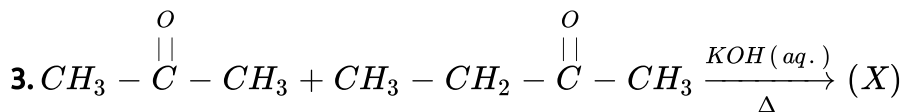
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x=moles of HCHO consumed.

Value of (x) will be.

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X=Number of aldol condensation product (including stereoisomer).

Find out the value of (X).

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