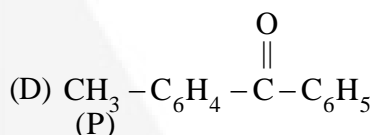
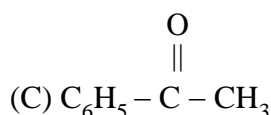
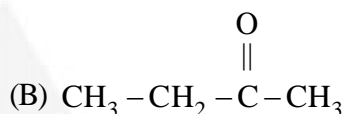
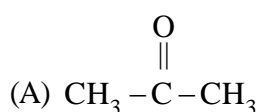


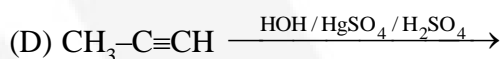
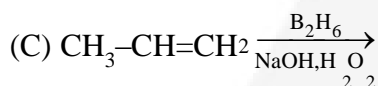
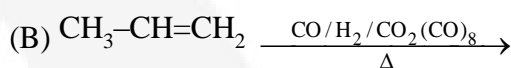
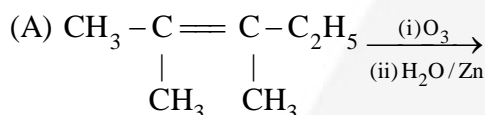
JEE CHEMISTRY

Topic - Carbonyl Compound

Q1 Which one of the following is mixed ketone:



Q2 In which of the following reactions product will be aldehyde?



Q3 Gemdihalide on hydrolysis gives:

(A) Vic diol

(B) Gemdiol

(C) Carbonyl compound

(D) Carboxylic acid

Q4 Which one of the following alcohols cannot be oxidised by K_2CrO_4 ?

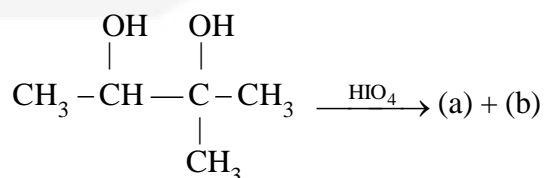
(A) Ethanol

(B) Tert butylalcohol

(C) Isopropylalcohol

(D) Allyl alcohol

Q5 In the given reaction:



(a) and (b) respectively be:

(A) CH_3CHO and CH_3CHO

(B) CH_3COCH_3 and CH_3CHO

(C) CH_3COCH_3 and CH_3COCH_3

(D) CH_3COOH and CH_3COCH_3

Q6 Acetophenone can be obtained by the distillation of:

(A) $(\text{C}_6\text{H}_5\text{COO})_2\text{Ca}$

(B) $(\text{CH}_3\text{COO})_2\text{Ca}$

(C) $(\text{C}_6\text{H}_5\text{COO})_2\text{Ca}$ and $(\text{CH}_3\text{COO})_2\text{Ca}$

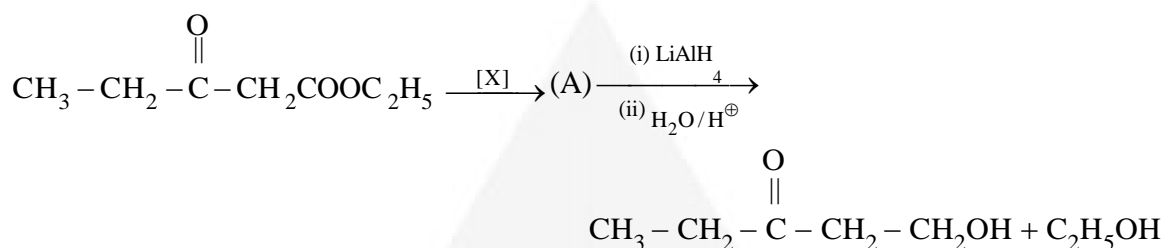
(D) $(\text{C}_6\text{H}_5\text{COO})_2\text{Ca}$ and $(\text{HCOO})_2\text{Ca}$

- Q.7 Arrange these compounds in decreasing order of reactivity for the nucleophilic addition reaction:
 (I) Acid chloride (II) Aldehyde (III) Ketone (IV) Ester
 Select the correct answer from the codes given below:
 (A) I > II > III > IV (B) IV > III > II > I (C) III > II > I > IV (D) I > IV > II > III

- Q.8 Two isomeric ketones, 3-pentanone and 2-pentanone can be distinguished by:
 (A) $I_2 / NaOH$ only (B) $NaSO_3H$ only (C) $NaCN / HCl$ (D) Both (A) and (B)

- Q.9 Acetal or ketal is:
 (A) Vic dialkoxy compound (B) α, ω -dialkoxy compound
 (C) α -alkoxy alcohol (D) Gemdialkoxy compound

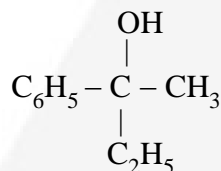
- Q.10 In the given reaction



[X] will be:

- (A) HCHO (B) $\begin{array}{c} CH_2 - OH \\ | \\ CH_2OH \end{array} + H^+$
 (C) $\begin{array}{c} CH_2 - OH \\ | \\ CH_2 - OH \end{array} + \overset{\ominus}{O}H$ (D) HCN

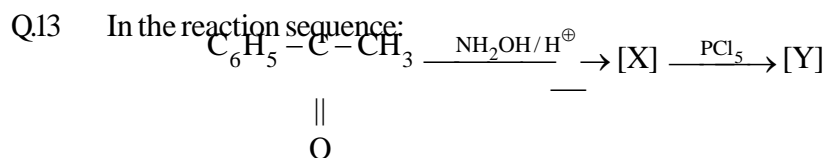
- Q.11 Consider the structure of given alcohol:



This alcohol can be prepared from:

- (A) $C_6H_5 - \overset{\overset{O}{\parallel}}{C} - CH_3$ and C_2H_5MgBr (B) $CH_3 - CH_2 - \overset{\overset{O}{\parallel}}{C} - CH_3$ and C_6H_5MgBr
 (C) $C_6H_5 - \overset{\overset{O}{\parallel}}{C} - C_2H_5$ and CH_3MgBr (D) All of these

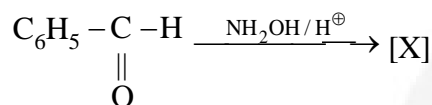
- Q.12 Stability of gemdiol depends on:
 (A) Steric hindrance (B) Presence of -I group on gemdiol carbon
 (C) Intramolecular hydrogen bonding (D) All of these



[Y] will be:

- (A) $\text{C}_6\text{H}_5 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{NHCH}_3$ (B) $\text{CH}_3 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{NH} - \text{C}_6\text{H}_5$
 (C) $\text{C}_6\text{H}_5 - \text{CH}_2 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{NH}_2$ (D) Mixture of (A) and (B)

Q.14 In the given reaction:



[X] will be:

- (A) Only syn oxime (B) Only anti oxime
 (C) mixture of syn and anti oxime (D) secondary amide

Q.15 Schiff's base is prepared from:

- (A) Carbonyl compound and primary amine (B) Carbonyl compound and secondary amine
 (C) Carbonyl compound and tertiary amine (D) All of these

Q.16 Schiff's reagent is used for the differentiation between:

- (A) HCHO and CH_3CHO
 (B) CH_3COCH_3 and CH_3CHO

- (C) $\text{C}_6\text{H}_5 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{CH}_2 - \text{CH}_3$ and $\text{C}_6\text{H}_5 - \underset{\text{O}}{\underset{\parallel}{\text{C}}} - \text{CH}_2 - \text{CH}_3$
 (D) HCHO and $\text{C}_6\text{H}_5\text{CHO}$

Q.17 Fehling solution gives red precipitate with:

- (A) Aromatic aldehyde (B) Saturated aliphatic aldehyde
 (C) Unsaturated aliphatic aldehyde (D) Both (B) and (C)

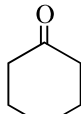
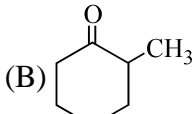
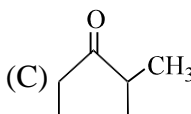
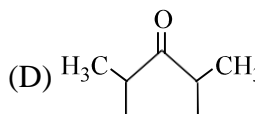
Q.18 Silver mirror test with Tollens reagent is given by:

- (A) $\text{C}_6\text{H}_5\text{CHO}$ (B) $\text{CH}_2=\text{CH}-\text{CHO}$
 (C) $\text{C}_6\text{H}_5-\text{CH}=\text{CH}-\text{CHO}$ (D) All of these

Q.19 In the reaction sequence, [X] is ketone :

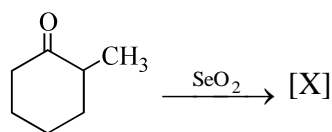


[X] will be:

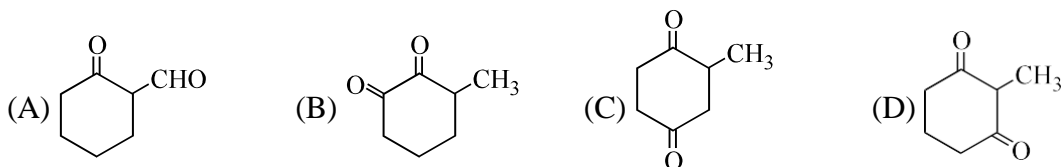
- (A)  (B)  (C)  (D) 

- Q20 Which one of the following compounds will give dimethylglyoxal with SeO_2 :
 (A) Acetone (B) Acetophenone (C) Ethylmethylketone (D) Propanaldehyde

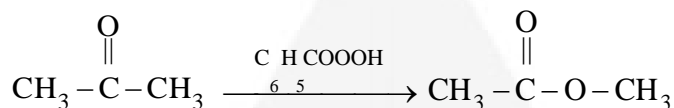
- Q21 In the given reaction



[X] will be:



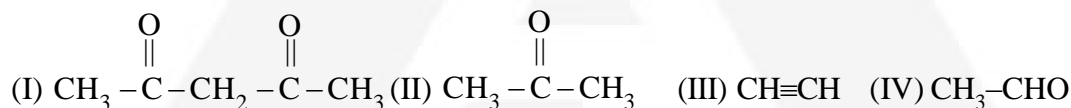
- Q22 Consider the given reaction :



The above reaction is known as :

- (A) Baeyer-villiger oxidation (B) Oppenaur oxidation
 (C) Periodate oxidation (D) Peroxide oxidation
- Q23 Acetone can be converted into pinacol by :
 (A) $\text{Mg/Hg/H}_2\text{O}$ (B) Zn/Hg/HCl (C) $\text{Na/Hg/H}_2\text{SO}_4$ (D) All of these

- Q24 Arrange acidity of given four compounds in decreasing order:

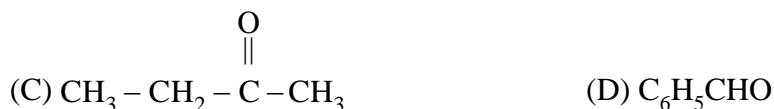


Select correct answer from the codes given below:

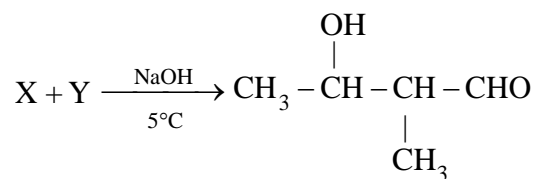
Codes:

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

- Q25 Which one of the following compounds will not give aldol:



Q26 In the given reaction



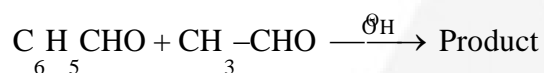
(X) and (Y) will respectively be:

(A) $\text{CH}_3\text{-CH}_2\text{-CHO}$ and $\text{CH}_3\text{-CH}_2\text{-CHO}$ (B) $\text{CH}_3\text{-CHO}$ and $\text{CH}_3\text{-CH}_2\text{-CHO}$

(C) $\text{CH}_3\text{-CHO}$ and $\text{CH}_3\text{-CHO}$

(D) $\text{CH}_3\text{-CHO}$ and $\text{CH}_3 - \overset{\text{CH}_3}{\underset{\text{CH}_3}{\underset{|}{\text{C}}}} - \text{CHO}$

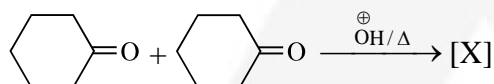
Q27 Number of products in the given reaction :



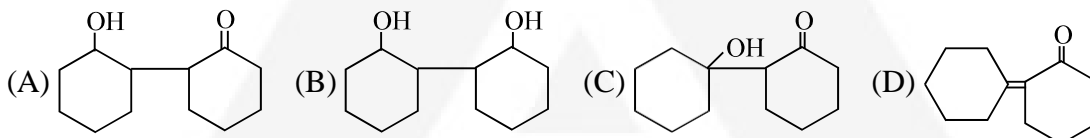
will be

(A) One (B) Three (C) Two (D) Four

Q28 In the reaction :



[X] will be :



Q29 Perkin reaction is catalysed by :

(A) NaOH (B) HCl (C) NH_4Cl (D) Pyridine

Q.30 Product of Perkin reaction is:

(A) α , β -unsaturated aldehyde (B) β -cyclohexyl α , β -unsaturated aldehyde
(C) β -Aryl- α , β -unsaturated acid (D) All of these

Answer Key

Que.	1	2	3	4	5	6	7	8	9	10
Ans.	C	B	C	B	B	C	A	D	D	B
Que.	11	12	13	14	15	16	17	18	19	20
Ans.	D	D	D	C	A	B	D	D	B	C
Que.	21	22	23	24	25	26	27	28	29	30
Ans.	B	A	A	B	D	B	C	D	D	C