

Oxygen Containing Organic Compounds-II

Level 1													DTS 1-5	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	C	B	C	C	BD	C	A	D	AB	B	D	A	B	C
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
B	B	B	C	B	D	ABC	A	B	A	A	ABC	B	B	A
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
B	B	C	C	D	ABD	A	ABC	A	C	AC	D	D	BC	A
46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
B	C	B	A	ABC	C	BD	A	A	D	BD	A	A	A	C
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
C	B	D	B	B	D	A	C	B	A	D	A	B	ABD	A

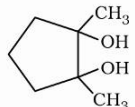
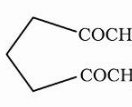
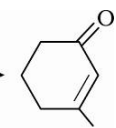
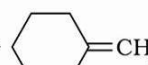
Level 2													DTS 6-10	
76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
ACD	CD	BC	A	B	C	ABC	CD	B	ABC	C	ABC	ABCD	AC	ACD
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105
AB	A	A	B	ABCD	C	C	C	B	C	B	B	B	B	C
106	107	108	109	110	111	112	113	114	115		116			
B	ABD	ABC	BCD	BCD	AB	ABC	ABCD	BCD	B		[A-1,2,3,4] [B-2,4] [C-1,4] [D-4]			
117			118				119				120			
[A-3] [B-1] [C-4] [D-2]			[A-2,3,4] [B-1] [C-1,2,4] [D-1,2,4]				[A-3,4] [B-1,2,3] [C-1,2,3] [D-1,2,3,4]				[A-4,5] [B-3,4] [C-4,5] [D-1,2,4,5]			
121		122		123			124				125			
C		A		C			B				D			

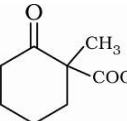
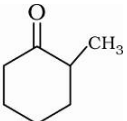
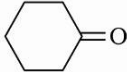
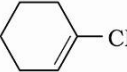
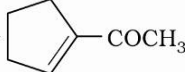
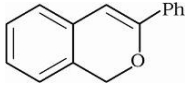
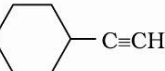
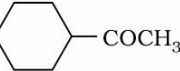
Numerical Value Type												DTS 11		
126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
3	4	1	2	2	7	10	14	4	3	11	4	8	2	3

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

31	32	33	34	35	36	37	38	39	40
D	A	B	C	A	D	D	B	B	C

JEE Advanced Archive	DTS 1-8
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- $\text{HCHO} \xrightarrow{\text{CH}_3\text{MgBr}} \xrightarrow{\text{H}_3\text{O}^+} \text{CH}_3\text{CH}_2\text{OH}$
- $(\text{CH}_2)_6\text{N}_4$
- S_E mechanism
- (C)
- F
- (B)
- (C)
- (ABD)
- (AB)
- (AC)
- $\text{Cl}_3\text{CCHO} + \text{NaOH} \xrightarrow{\Delta} \text{CHCl}_3 + \text{HCOONa}$
- $\text{CH}_3\text{CHO} \xrightarrow{[\text{O}]} \text{CH}_3\text{COOH} \xrightarrow[\text{-H}_2\text{O}]{\text{CaO}} (\text{CH}_3\text{COO})_2\text{Ca} \xrightarrow{\Delta} \text{CH}_3\text{COCH}_3 \xrightarrow{\text{NH}_2\text{OH}} (\text{CH}_3)_2\text{C}=\text{NOH}$
- (i) $\text{C}_6\text{H}_5\text{COCH}_2\text{CH}_3$
- (ii) $\text{CH}_3\text{CH}_2\text{CH}=\text{C}(\text{CH}_3)\text{CHO}$
- $\text{CH}_3\text{CH}_2\text{CH}=\text{C}(\text{CH}_3)\text{CHO}$
- $\text{C}_2\text{H}_5\text{COCH}_3 < \text{CH}_3\text{COCH}_3 < \text{CH}_3\text{CHO} < \text{HCHO}$
- $\text{HC}\equiv\text{CH} \xrightarrow[\text{Hg}^{2+}, \text{H}^+]{\text{H}_2\text{O}} \xrightarrow{[\text{O}]} \xrightarrow{\text{CaO}} \xrightarrow{\Delta} \text{CH}_3\text{COCH}_3$
- (C)
- $\text{A} = (\text{CH}_3)_2\text{CHCH}(\text{Cl})\text{CH}_2\text{CH}_3$; $\text{B} = (\text{CH}_3)_2\text{CHCH}=\text{CHCH}_3$; $\text{C} = (\text{CH}_3)_2\text{C}=\text{CHCH}_2\text{CH}_3$
- $(\text{C}_6\text{H}_5\text{CHO} + \text{HCHO})$
- $\text{C}_6\text{H}_5\text{CHO} \xrightarrow{[\text{O}]} \xrightarrow[\text{CaO}]{\text{NaOH}} \xrightarrow[\text{H}_2\text{SO}_4]{\text{HNO}_3} \xrightarrow[\text{HCl}]{\text{Fe}} \xrightarrow[\text{HCl}(0-5^\circ\text{C})]{\text{NaNO}} \xrightarrow[\text{CuCN}]{\text{KCN}}$
- NH_2NH_3^+ is less nucleophilic
- (C)
- (i) Tollen's reagent
- (ii) Free radical substitution of side chain to form $\text{C}_6\text{H}_5\text{CCl}_3$
- $\text{CH}_3\text{CH}_2\text{CH}_2\text{COCH}_3$ or $(\text{CH}_3)_2\text{CHCOCH}_3$
- F
- (D)
- $\text{A} \rightarrow \text{CH}_3\text{COCH}_2\text{CH}_3$; $\text{B} \rightarrow \text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{CH}_3$; $\text{C} \rightarrow \text{CH}_3\text{CH}=\text{CHCH}_3$
- (AB)
- Sodium potassium tartarate
- (A)
- (D)
- Hypo iodite is oxidizing agent and iodoform formation involve oxidation reaction. Iodide is reducing agent.
- $\text{CH}_3\text{CHO} < \text{CH}_3\text{COCH}_3 < \text{CH}_3\text{COCH}_2\text{CHO} < \text{CH}_3\text{COCH}_2\text{COCH}_3$
- (B)
- $\text{C}_6\text{H}_5\text{CH}_2\text{Cl}(\text{OH})(\text{CH}_3)_2$
- $\text{A} \rightarrow \text{SOCl}_2$; $\text{B} \rightarrow \text{POCl}_3$; $\text{C} \rightarrow \text{CH}_3\text{COCl}$; $\text{D} \rightarrow \text{CH}_3\text{COCH}_3$
- $\text{p-MeO}-\text{C}_6\text{H}_4\text{CH}_2\text{OH}$ and HCOOK
- $\text{A} \rightarrow$  $\text{B} \rightarrow$  $\text{C} \rightarrow$ 
- $\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CN}$, $\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{NH}_2$
- $\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CN}$, $\text{CH}_3\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{NH}_2$
- $\text{A} \rightarrow$  $\text{B} \rightarrow \text{PhCO}-$  $\text{C} \rightarrow$  $\text{D} \rightarrow \text{C}_3\text{H}_7\text{COOH}$
- $\text{A} \rightarrow (\text{CH}_3)_2\text{CHCH}=\text{CH}_2$; $\text{B} \rightarrow (\text{CH}_3)_2\text{CHCH}(\text{Br})\text{CH}_3$; $\text{C} \rightarrow (\text{CH}_3)_2\text{CHCH}(\text{OH})\text{CH}_3$; $\text{D} \rightarrow (\text{CH}_3)_2\text{CHCOCH}_3$
- Two asymmetric carbon atoms. Three stereoisomers
- (C)
- (i) Through carbocationic intermediate
- (ii) Addition of phenolic OH on $\text{C}=\text{C}$ in presence of acid
- $\text{C}_6\text{H}_5\text{CHO} / \text{NaOH}$; LiAlH_4 reduces $\text{C}=\text{C}$ in case of α, β -unsaturated carbonyl compounds.
- $\text{A} : \text{C}_6\text{H}_5\text{CH}=\text{CH}-\text{C}\equiv\text{C}-\text{CHO}$ $\text{B} : \text{OHC}-\text{COOH}$
- (B)
- (ACD)
- (BD)
- (ABD)
- (AD)
- (B)
- (a) $\text{A} : \text{C}_6\text{H}_5\text{COCH}_3$ $\text{B \& C} : \text{C}_6\text{H}_5(\text{CH}_3)\text{C}=\text{NOH}$ $\text{D} : \text{CH}_3\text{CONHC}_6\text{H}_5$ $\text{E} : \text{C}_6\text{H}_5\text{CONHCH}_3$
 $\text{F} : \text{C}_6\text{H}_5\text{NH}_2$ $\text{G} : \text{C}_6\text{H}_5\text{COOH}$

- (b) $C_2H_5C \equiv CH \xrightarrow[2. H_2O_2 / HO^-]{1. B_2H_2} \xrightarrow[2. H_3O^+]{1. CH_3MgBr} \xrightarrow{[O]}$
56. $A \rightarrow CHBr_3$; $B \rightarrow$  ; $C \rightarrow$ 
57. $A \rightarrow$  ; $B \rightarrow$  ; $C \rightarrow$ 
58. 
59. $A \rightarrow Ph(CH_3)C=C(CH_3)Ph$ (cis and trans isomer) $B \rightarrow PhCOCH_3$ $C \rightarrow PhCH_2CH_3$ Trans isomer form racemic mixture.
60. $A \rightarrow$  $B \rightarrow$  $C \rightarrow$ 
- $D \rightarrow$  $E \rightarrow$ 
61. $A \rightarrow p-MeO-C_6H_4-CHO$ $B \rightarrow p-HO-C_6H_4-CH_2CHO$ $C \rightarrow p-HO-C_6H_4-COCH_3$
 $D \rightarrow p-CH_3-C_6H_4-COOH$ $E \rightarrow p-HO-C_6H_4-OCH=CH_2$
62. $A \rightarrow (CH_3)_3CCH=CH_2$ $B \rightarrow CH_3CH(Cl)C(CH_3)_3$ $C \rightarrow (CH_3)_3CCH(Cl)CH_3$
 $D \rightarrow (CH_3)_2CC(CH_3)_2$ $E \rightarrow CH_3COCH_3$ $F \rightarrow (CH_3)_3CCHO$
 $G \rightarrow HCHO$
63. $A \rightarrow m-Cl-C_6H_4-C(OH)=CH-CHO$ $B \rightarrow m-Cl-C_6H_4-COCH_2CHO$

64	65	66	67	68					69	70	71	72	73	74
D	B	C	C	A-p, q, s ; B-q, r ; C-q, r, s ; D-q, r					D	A	C	B	A	D
75				76	77	78	79	80	81	82	83	84	85	86
A-p, q, t ; B-p, s, t ; C-r, s ; D-p				D	B	A	B	1	B	A	D	D	B	B
87				88	89	90	91	92	93	94	95	96	97	98
A-r, s, t ; B-p, s ; C-r, s ; D-q, r				B	A	C	ABCD	A	C	C	C	D	A	C
99	100	101	102	103	104	105	106	107	108	109	110	111	112	113
5	A	ABCD	4	D	C	A	ABD	A	A	AB	B	A	B	ABD
114	115	116	117	118	119	120	121	122						
C	A	D	D	C	BD	4	BD	6.00						