# Sri Chaitanya IIT Academy, India

A.P, TELANGANA, KARNATAKA, TAMILNADU, MAHARASHTRA, DELHI, RANCHI

A right Choice for the Real Aspirant

ICON CENTRAL OFFICE, MADHAPUR-HYD

**Sec: Sr. IPLCO** **Date: 05-09-15**

**Time: 9:00 AM to 12:00 Noon** **RPTM-5** **Max.Marks: 360**

## KEY SHEET

| PHYSICS | | MATHS | | CHEMISTRY | |
|---|---|---|---|---|---|
| Q.NO | ANSWER | Q.NO | ANSWER | Q.NO | ANSWER |
| 1 | 2 | 31 | 3 | 61 | 4 |
| 2 | 1 | 32 | 1 | 62 | 2 |
| 3 | 1 | 33 | 4 | 63 | 1 |
| 4 | 2 | 34 | 3 | 64 | 4 |
| 5 | 3 | 35 | 3 | 65 | 4 |
| 6 | 2 | 36 | 1 | 66 | 4 |
| 7 | 1 | 37 | 4 | 67 | 2 |
| 8 | 1 | 38 | 1 | 68 | 4 |
| 9 | 3 | 39 | 1 | 69 | 3 |
| 10 | 1 | 40 | 3 | 70 | 2 |
| 11 | 2 | 41 | 2 | 71 | 3 |
| 12 | 3 | 42 | 1 | 72 | 4 |
| 13 | 2 | 43 | 4 | 73 | 1 |
| 14 | 2 | 44 | 1 | 74 | 2 |
| 15 | 2 | 45 | 4 | 75 | 3 |
| 16 | 2 | 46 | 4 | 76 | 3 |
| 17 | 4 | 47 | 2 | 77 | 3 |
| 18 | 1 | 48 | 3 | 78 | 3 |
| 19 | 3 | 49 | 3 | 79 | 4 |
| 20 | 3 | 50 | 1 | 80 | 4 |
| 21 | 2 | 51 | 4 | 81 | 4 |
| 22 | 3 | 52 | 4 | 82 | 4 |
| 23 | 3 | 53 | 1 | 83 | 3 |
| 24 | 4 | 54 | 3 | 84 | 3 |
| 25 | 2 | 55 | 2 | 85 | 2 |
| 26 | 2 | 56 | 3 | 86 | 2 |
| 27 | 1 | 57 | 1 | 87 | 2 |
| 28 | 4 | 58 | 3 | 88 | 2 |
| 29 | 2 | 59 | 2 | 89 | 4 |
| 30 | 1 | 60 | 2 | 90 | 2 |

# CHEMISTRY

61. Convertion of hemiacetal to acetal requires acid medium for the dehydration.

Carbonyl groups being more polar, thus $\underset{(2.5D)}{\underset{(Propanal)}{CH_3-CH_2CH=O}}$ dipolemoment of these $\underset{(0.3D)}{\underset{(1\text{-Butene})}{CH_3CH_2CH=CH_2}}$ are substantially larger than those of alkenes with comparable molecular masses. Alkyl substituents stabilize the carbonyl group in the same way that they stabilize C = C double bond or carbocation. Heat of combustion of butanal is 592Kcal/mole whereas for that of butanone is 584Kcal/mole.

62. Liquid dish washing detergents are non-ionic type.

63. Some of the tranquillizers reduce the level of noradrenaline by inhibiting the action of related enzymes

64. Sucralose does not decompose while aspartame does at the cooking temperature.

65. Bithonol is added to soap to give antiseptic properties.

66. A narrow spectrum antibiotic is active against gram-positive or gram-negative bacteria.

67. b - sodium benzoate is food preservative

a – sodium lauryl sulphate is biodegradable detergent.

c – sodium stearate is soap.

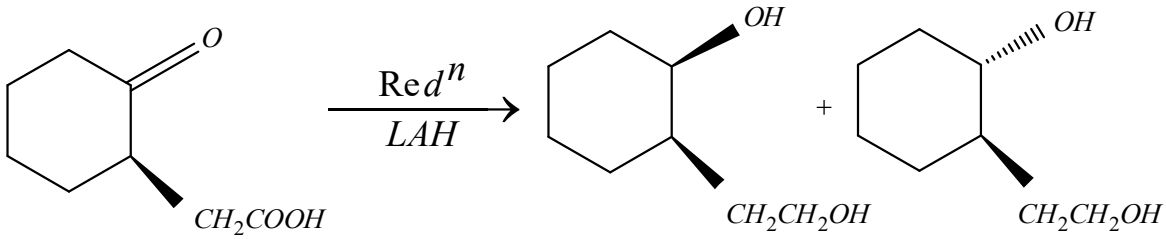
68. $(P) \Rightarrow CH_3-CHO$

$(Q) \Rightarrow CH_3-CH_2-CHO$

69. Vitamins are never drug target in a body.

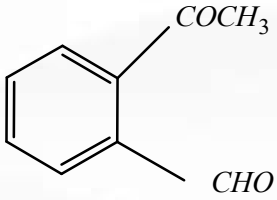
70. due to steric and electronic factors

71. $CH_3CH_2CH_2CH_2CHO$ , $CH_3CH_2CH(CH_3)CHO$, $(CH_3)_3C-CHO$ , $CH_3CH(CH_3)CH_2CHO$

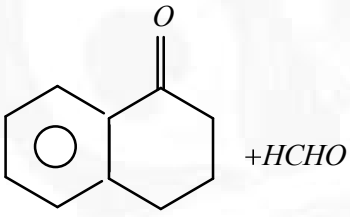
72. 

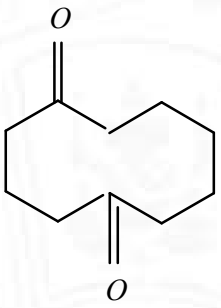

73. It is an aldol condensation at low temperature to give $\beta$ - hydroxy ketone

74. It is acid catalysed aldol condensation

75. a) is obtained from 

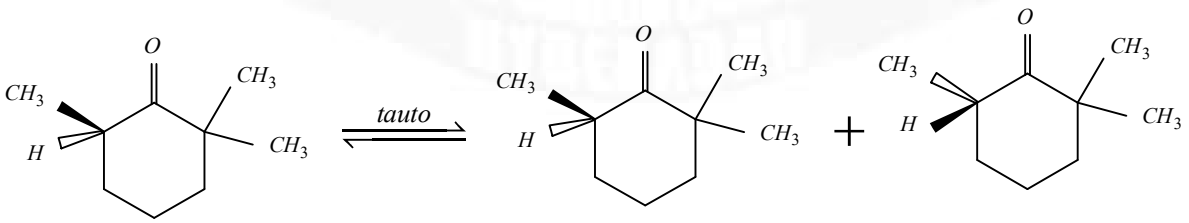

b) is obtained from $CH_3COCH_2CH_2CH_2CHO$

c) is obtained from 

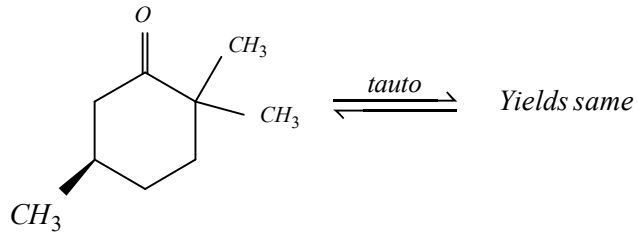




d) is obtained from

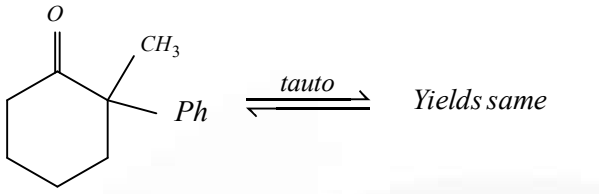
76.

I) 

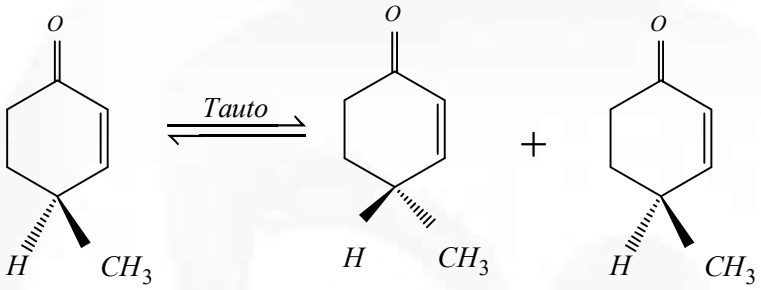
II)



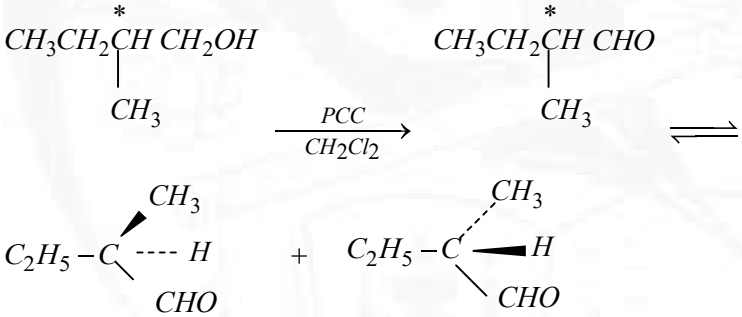

III)



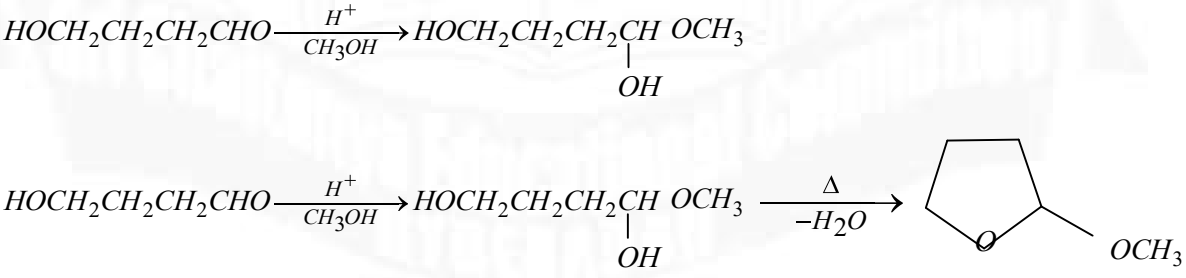

IV)

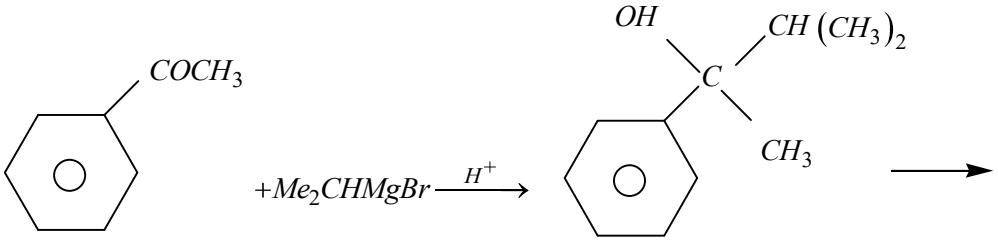



77.




78.





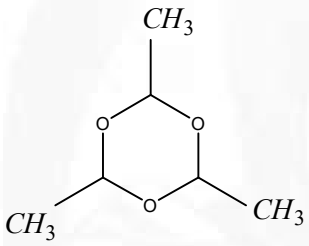

79. Not oxidised by PCC

80. All of them are acetals.

81. 5-ethyl 4-oxo-hex-5-ene-1-al

82. Alkenes are electron rich and do not attacked by nucleophiles

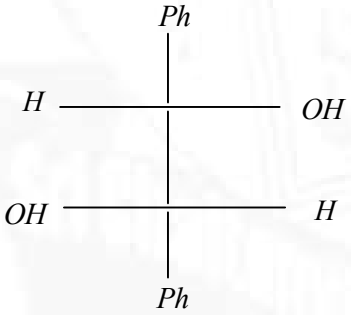
83. Jone's reagent oxidize $1^0$ - alcohols to carboxylic acid, whereas PCC oxidzes $1^0$ - alcohols to aldehydes

84. 

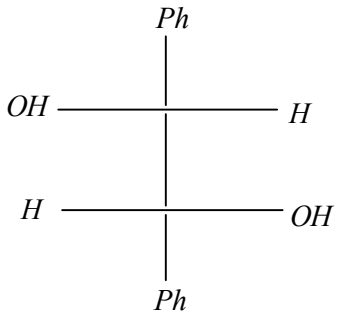
only three out of six carbon atoms bonded to two oxygen atoms

85. Clear , colourless aq. solution of 40% formaldehyde solution is Formalin. It is used to preserve bioglogical specimens

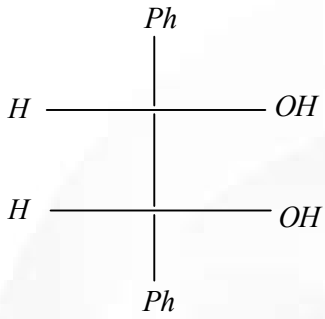
86.




1)

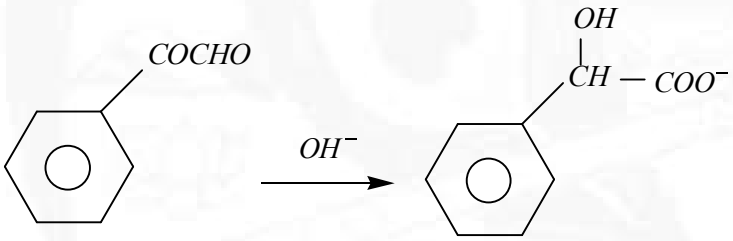



2)

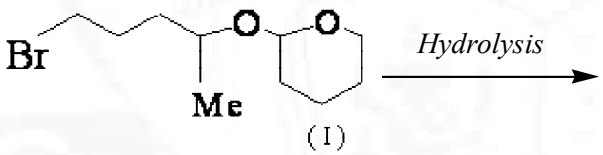



3)

87. (I & II ) hemiacetals gives positive Tollen's test , (III) acetal do not show positive Tollen's test

88. 


Intramolecular Cannizaro type.




$BrCH_2CH_2CH_2CH(OH)CH_3$ +

89. $HOCH_2CH_2CH_2CH_2CHO(5-hydroxy\ pentanal)$

90. Beckmann Rearrangement-anti migration takes place