

Date Planned : / /	Daily Tutorial Sheet – 11	Expected Duration : 90 Min
Actual Date of Attempt : / /	Numerical Value Type for JEE Main	Exact Duration :

126. How many of the following compounds undergoes oxidative cleavage on reaction with HIO<sub>4</sub>?

127. How many total number of aldehyde and carboxylic acid compounds are obtained when following compounds undergo reaction with  ${\rm HIO}_4$ ?

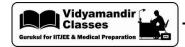
128. How many of the following compounds undergo pinacol-pinacolone rearrangement?

129.  $Mg-Hg \rightarrow (A)$  How many — OH groups are present in product (A)

130. 
$$\frac{\text{CH}_{3 \text{ Mym}} \text{CH}_{3}}{\text{dil.H}_{2}\text{SO}_{4}} \text{(A) How many atoms are present in one plane in product A?}$$

131.  $CH_3 - CH_3 - CH$ 

If one mole of given compound reacts with HI then what is the value of x?



- 133. How many of the following are more reactive than CH<sub>3</sub>CH(OH)CH<sub>3</sub> for Lucas reagent?
  - CH<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>OH
  - $\mathrm{CH_3} \mathrm{CH} \mathrm{CH_2OH}$
  - $\begin{array}{c} \operatorname{CH_3} \\ \operatorname{CH_3} \\ \operatorname{CH_3} \\ -\operatorname{C} \operatorname{OH} \\ \operatorname{CH_3} \end{array}$
- 134. How many compounds give victor-Meyer test and produce red colouration.

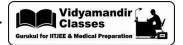
$$\begin{array}{ccccc} \operatorname{CH_3} & \operatorname{CH_3} & \operatorname{CH_3} \\ | & | & | \\ \operatorname{CH_3} - \operatorname{C} - \operatorname{OH} \cdot \operatorname{CH_3} - \operatorname{CH} - \operatorname{OH} \cdot \operatorname{CH_3} \operatorname{CH_2} \operatorname{CH_2} \operatorname{I} \\ | & | & | \\ \operatorname{CH_3} & & | \end{array}$$

$$\begin{array}{cccc} \mathrm{CH_3CH_2CH_2OH} & \mathrm{CH_3CH_2NO_2} & \mathrm{CH_3CH} - \mathrm{CH_3} \\ & & | \\ & \mathrm{NO_2} \end{array}$$

- 135. How many of the following pairs of compounds can be distinguished by victor's Meyer's test?
  - $\mathrm{CH_{3}CH_{2}CH}-\mathrm{OH}^{\top}\mathrm{CH_{3}CH_{2}OH}$

  - $\begin{array}{c} \mathsf{CH_3} \\ \mathsf{CH_3CH_2OH}, \quad \mathsf{CH_3} \; \mathsf{CH} \mathsf{CH_3} \\ \mathsf{OH} \\ \mathsf{CH_3CH_2I}, \quad \mathsf{CH_3} \mathsf{CH} \mathsf{CH_3} \\ \mathsf{I} \\ \mathsf{CH_3} & \mathsf{CH_3} \\ \mathsf{I} \\ \mathsf{CH_3} & \mathsf{CH_3} \\ \mathsf{CH_3CH-I}, \; \mathsf{CH_3} \mathsf{CH} \mathsf{OH} \\ \mathsf{CH_3} \\ \mathsf{CH_3} \mathsf{C} \mathsf{I} \cdot \mathsf{CH_3CH} \mathsf{CH_3} \\ \mathsf{CH_3} & \mathsf{I} \\ \mathsf{CH_3} & \mathsf{I} \\ \mathsf{CH_3} \\ \mathsf{CH_3} & \mathsf{C} \\ \mathsf{CH_3} & \mathsf{I} \\ \mathsf{CH_3} & \mathsf{C} \\ \mathsf{C} \\ \mathsf{CH_3} & \mathsf{C} \\ \mathsf{C}$
- 136. An unknown compound (A) having molar mass = 180, on acylation gives a product whose molar mass = 390, then find the number of hydroxyl groups present in compound A.

One mole of given compound is reacted with  $HIO_4$ , how many moles of  $HIO_4$  are consumed?



- 138. 0.092 g of a compound (A) with the molecular formula  $C_3H_8O_3$  on reaction with an excess of  $CH_3MgI$  gives 67 mL of methane at STP. The number of active hydrogen atoms present in a molecule of the compound (A) is:
- $\textbf{139.} \quad \text{How many primary alcohol (including stereoisomers) are possible with formula } \ C_5 H_{12} O \ ?$
- 140. If  $(\pm)2$  methyl butanoic acid were esterified by reaction with  $(\pm)2$  butonal, how many optically active compounds would be present in the final equilibrium reaction mixture?