

(C) can not form cyclic intermediate with  ${\rm HIO_4}$  as it is a trans type diol. Hence it does not undergo cleavage.

**117.(A)** x will be same as number of bonds which can be cleaved

118.(C)

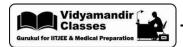
 $\textbf{120.(AB)} \qquad \text{HIO}_4 \ \ \text{will not oxidise non-viccinal diols and not used for cleavage of ethers.}$ 

**121.(B)** Visualise mechanism of Reimer Tiemann reaction.

Note that bond energy of C-D is higher than C-H, so during IMPT, it is easier to break C-H bond.

**122.(ABCD)**  ${\rm MnO_2}$  oxidise only allylic and benzylic alcohols.

$$\begin{array}{c|c} \text{OH} & \text{C}_6\text{H}_5 \\ \text{OH} & \text{OH} \end{array}$$



123.(A)

$$\begin{array}{c} CH_3 \\ OH \\ \hline \\ -H_2O \end{array} \\ \begin{array}{c} H^+ \\ H^- \\ Shift \end{array} \\ \begin{array}{c} Me \\ Me \\ Me \end{array} \\ \begin{array}{c} Me \\ Me \\ Me \end{array} \\ \begin{array}{c} Me \\ Me \\ Me \end{array}$$

Alcohols also give F.C. alkylation.

124.(ABC)

(A) 
$$Br + Na\bar{o} NO_2 S_{N^2} NO_2$$
Benzyl bromide

(B) Me 
$$\overline{O}$$
Na<sup>+</sup> + (CH<sub>3</sub>)<sub>2</sub>SO<sub>4</sub>  $\xrightarrow{S_N 2}$  Me  $O$  Me + CH<sub>3</sub>OSO<sub>2</sub>ONa Dimethyl sulphate

(C) 
$$Me^{ONa^{+}} + H_{3}C \longrightarrow O \longrightarrow SO_{2}C_{6}H_{4}CH_{3} \longrightarrow Me \longrightarrow O$$
(Sulphonate)

(CH<sub>3</sub>)<sub>3</sub>Br + CH<sub>3</sub>CH<sub>2</sub>ONa 
$$\xrightarrow{E2}$$
 CH<sub>2</sub> = C(CH<sub>3</sub>)<sub>2</sub>

125. [A-p, q, r]

[B-p]

[C-p, s]

[D-r, s]