

**ORGANIC CHEMISTRY - I****CODE: OCA  
STD: XII****MARKS: 75  
TIME: 1½ HR****I. CHOOSE THE BEST ANSWER:****10X1=10**

- The isomer in which similar groups lie on the same side is called  
i) Functional Isomer ii) Cis-isomer iii) Trans-isomer iv) E-isomer
- On heating trans isomer can be converted into cis isomer by breaking carbon-carbon  
i)  $\sigma$  bond ii)  $\pi$  bond iii) double bond iv) triple bond
- Which compound does not have zero dipole moment ?  
i) Trans-2-butene ii) Trans-2,3-dibromo-2-butene  
iii) Cis-2-butene iv) Para dichlorobenzene
- The chiral molecule among the following  
i) Isopropyl Alcohol ii) isobutyl Alcohol  
iii) 2-pentanol iv) 1-bromo-3-butene
- Which pair represents chain isomerism ?  
i) 1-butanol and 2-methyl-1-propanol ii) 1-pentanol and 2-pentanol  
iii) 1-propanol and 2-propanol iv) Ethanol and Dimethyl ether
- When phenol is distilled with Zn dust it gives  
i) Benzaldehyde ii) Benzoic Acid iii) Toluene iv) Benzene
- Diethyl ether can be decomposed with  
i) HI ii)  $\text{KMnO}_4$  iii) NaOH iv)  $\text{H}_2\text{O}$
- Drydistillation of calcium autate and calcium formate gives  
i) HCHO ii)  $\text{CH}_3\text{CHO}$  iii)  $\text{CH}_3\text{COCH}_3$  iv)  $\text{C}_6\text{H}_5\text{COCH}_3$
- Which compound does not undergo aldol type condensation?  
i)  $\text{CH}_3\text{CHO}$  ii)  $\text{CH}_3\text{COCH}_3$  iii)  $\text{CH}_3\text{CH}_2\text{CHO}$  iv) HCHO
- Which compound on strong oxidation gives propionic acid?  
i)  $\text{CH}_3\text{-CH(OH)-CH}_3$  ii)  $\text{CH}_3\text{-CO-CH}_3$  iii)  $(\text{CH}_3)_3\text{C-OH}$  iv)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{-OH}$

**II. GIVE ANSWER IN ONE OR TWO SENTENCES****10X3=30**

- Account for the following  
a) The boiling point of alcohols are far higher than hydrocarbons.  
b) Ethanol cannot be dried over anhydrous  $\text{CaCl}_2$ .
- Write note on Lucas test.
- Write note on haloform reaction.
- How can the following be obtained ?  
a) Phenol from benzenediazonium chloride.  
b) 2,4,6-tribromophenol from phenol.
- How does diethyl ether react with  $\text{CH}_3\text{MgI}$  ?
- What is Rosenmund's reduction ?
- How are the following prepared ? a) Acetophenone b) Benzaldehyde (1 method each)
- Write IUPAC names for a) Salicylaldehyde b) Cinnamaldehyde
- Distinguish racemic form from meso form
- Assign R, S – designation for the following,

**III. GIVE SHORT ANSWERS:****3X5=15**

- Draw the different conformations of cyclohexane clearly indicating the various C – H bonds.
- How will you distinguish between 1°, 2° and 3° alcohols using Victor-Meyer's method ?
- Illustrate electrophilic substitution reactions of anisole.

**III. GIVE DETAILED ANSWERS:****2X10=20**

- (a) Identify the product 'A' and 'B'  $\text{CH}_3\text{-CH(OH)-CH}_3 \xrightarrow[\text{Prolonged}]{(\text{O})} (\text{A}) \xrightarrow{(\text{O})} (\text{B})$   
(b) Write a note on acidic nature of Phenol
- (a) Write differences between acetaldehyde and formaldehyde.  
(b) How can the following conversions be effected ?  
i)  $\text{CH}_3\text{COCl} \rightarrow \text{CH}_3\text{COCH}_3$  ii)  $\text{CH}_3\text{CN} \rightarrow \text{CH}_3\text{CHO}$  iii)  $\text{CH}_3\text{CN} \rightarrow \text{CH}_3\text{CH}_2\text{-OH}$



