## DPP-1

**1.** Butane-2-ol is
(A) Primary alcohol
(B) Secondary alcohol
(C) Tertiary alcohol
(D) Aldehyde

**2.** Picric acid is
(A) Trinitroaniline
(B) Trinitrotoluene
(C) A volatile liquid
(D) 2, 4, 6 trinitrophenol

**3.** 3- pentanol is a
(A) Primary alcohol
(B) Secondary alcohol
(C) Tertiary alcohol
(D) None of these

**4.** Glycerol is a
(A) Primary alcohol
(B) Monohydric alcohol
(C) Secondary alcohol
(D) Trihydric alcohol

**5.** Cresols are
(A) Hydroxytoluenes
(B) Dihydric phenols
(C) Trihydric phenols
(D) Trihydric alcohols

**6.** Carbon percentage is maximum in
(A) Pyrene (B) Gammexane
(C) Ethylene glycol (D) PVC

**7.** Ortho-dihydroxy benzene is
(A) Carvacrol (B) Resorcinol
(C) Catechol (D) Orcinol

**8.** Glycerine has
(A) One primary and two secondary $-OH$ groups
(B) One secondary and two primary $-OH$ groups
(C) Three primary $-OH$ groups
(D) Three secondary $-OH$ groups

**9.** Which of the following is tertiary alcohol

(A) $CH_2-OH$ | $CH-OH$ | $CH_2-OH$

(B) $CH_3-\underset{\displaystyle CH_2-CH_2OH}{\overset{\displaystyle CH_2}{\overset{|}{\underset{|}{CH_2}}}}$

(C) $CH_3-\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}-OH$

(D) $CH_3-CH_2-OH$

**10.** Which is primary alcohol
(A) Butane-2-ol
(B) Butane-1-ol
(C) Propane-2-ol
(D) Isopropyl alcohol

**11.** Carbinol is
(A) $C_2H_5OH$
(B) $CH_3OH$
(C) $(CH_3)_2CHOH$
(D) $CH_3CH_2CH(OH)CH_3$

**12.** General formula of primary alcohol is
(A) $\rangle CHOH$ (B) $\rangle C-OH$
(C) $-CH_2OH$ (D) $=C\langle^{OH}_{OH}$

**13.** Which of following is phenolic
(A) Phthalic acid
(B) Phosphoric acid
(C) Picric acid
(D) Phenylacetic acid

**14.** 1, 2, 3-trihydroxybenzene is also known as
(A) Pyrogallol
(B) Phloroglucinol
(C) Resorcinol
(D) Quinol

**15.** Butanal is an example of
(A) Primary alcohol
(B) Secondary alcohol
(C) Aliphatic aldehyde
(D) Aliphatic ketone

## DPP-2

**1.** Ethanol is prepared industrially by
(A) Hydration of ethylene
(B) Fermentation of sugars
(C) Both the above
(D) None of these

**2.** Ethyl alcohol is industrially prepared from ethylene by
(A) Permanganate oxidation

(B) Catalytic reduction
(C) Absorbing in $H_2SO_4$ followed by hydrolysis
(D) Fermentation

**3.** Propene, $CH_3-CH=CH_2$ can be converted to 1-propanol by oxidation. Which set of reagents among the following is ideal to effect the conversion
(A) Alkaline $KMnO_4$
(B) $B_2H_6$ and alkaline $H_2O_2$
(C) $O_3$ / $Zn$ dust
(D) $OsO_4$ / $CH_4, Cl_2$

**4.** Which one of the following will produce a primary alcohol by reacting with $CH_3MgI$
(A) Acetone
(B) Methyl cyanide
(C) Ethylene oxide
(D) Ethyl acetate

**5.** The fermentation of starch to give alcohol occurs mainly with the help of
(A) $O_2$ (B) Air
(C) $CO_2$ (D) Enzymes

**6.** Coconut oil upon alkaline hydrolysis gives
(A) Glycol (B) Alcohol
(C) Glycerol (D) Ethylene oxide

**7.** Which enzyme converts glucose and fructose both into ethanol
(A) Diastase (B) Invertase
(C) Zymase (D) Maltase

**8.** Chlorination of toluene in the presence of light and heat followed by treatment with aqueous *NaOH* gives
(A) *o*-cresol
(B) *p*-cresol
(C) 2, 4-dihydroxy toluene
(D) Benzyl alcohol

**9.** In the commercial manufacture of ethyl alcohol from starchy substances by fermentation method, which enzymes stepwise complete the fermentation reaction.
(A) Diastase, maltase and zymase
(B) Maltase, zymase and invertase
(C) Diastase, zymase and lactase
(D) Diastase, invertase and zymase

**10.** Primary alcohols can be obtained from the reaction of the*RMgX* with
(A) $CO_2$ (B) *HCHO*
(C) $CH_3CHO$ (D) $H_2O$

**11.** On heating aqueous solution of benzene diazonium chloride, which is formed
(A) Benzene (B) Chlorobenzene
(C) Phenol (D) Aniline

**12.** $LiAlH_4$ converts acetic acid into
(A) Acetaldehyde (B) Methane
(C) Ethyl alcohol (D) Methyl alcohol

**13.** Formaldehyde gives an additive product with methyl magnesium iodide which on aqueous hydrolysis gives
(A) Isopropyl alcohol (B) Ethyl alcohol
(C) Methyl alcohol (D) Propyl alcohol

**14.** Benzyl alcohol is obtained from benzaldehyde by
(A) Fittig's reaction
(B) Cannizaro's reaction
(C) Kolbe's reaction
(D) Wurtz's reaction

**15.** Benzene diazonium chloride on boiling with dilute sulphuric acid gives
(A) Toluene
(B) Benzoic acid
(C) Benzene
(D) Phenol

## DPP-3

**1.** Phenol is obtained by heating aqueous solution of
(A) Aniline
(B) Benzene diazonium chloride
(C) Benzoic acid
(D) None of these

**2.** $C_2H_5MgI$ reacts with *HCHO* to form last product
(A) $CH_3CHO$ (B) $C_3H_7OH$
(C) $CH_3COCH_3$ (D) $CH_3COOCH_3$

**3.** Which one is not synthesized by Grignard reagent
(A) Primary alcohol
(B) Secondary alcohol
(C) A ketone
(D) An ester

**4.** Reaction of aqueous sodium hydroxide on (i) ethyl bromide and (ii) chlorobenzene gives
(A) (i) Ethene and (ii) *o*-chlorophenol
(B) (i) Ethyl alcohol and (ii) *o*-chlorophenol
(C) (i) Ethyl alcohol and (ii) phenol
(D) (i) Ethyl alcohol and (ii) no reaction

**5.** *RMgBr* on reaction with an excess of oxygen followed by hydrolysis gives
(A) *RH* (B) *ROOR*
(C) *ROOH* (D) *ROH*

**6.** The reaction between an ester and excess of Grignard reagent shall finally result in
(A) Primary alcohol
(B) Secondary alcohol
(C) Tertiary alcohol
(D) Ketone

**7.** The compound that will react most readily with *NaOH* to form methanol is

(A) $(CH_3)_4N^+I^-$ (B) $CH_3OCH_3$

(C) $(CH_3)_3S^+I^-$ (D) $(CH_3)_3Cl$

**8.** When 2-ethylanthraquinol dissolved in a mixture of benzene and cyclohexanol is oxidised, the product is

(A) Ethanol

(B) Hydrogen peroxide

(C) Anthracene

(D) None of these

**9.** Which gas is eliminated in fermentation

(A) $O_2$ (B) $CO_2$

(C) $N_2$ (D) $H_2$

**10.** Action of nitrous acid with ethylamine produces

(A) Ethane (B) Ammonia

(C) Ethyl alcohol (D) Nitroethane

**11.** The product of reduction of benzaldehyde is

(A) Benzoic acid (B) Benzyl alcohol

(C) Benzene (D) Catechol

**12.** Commercially methanol is prepared by

(A) Reduction of $CO$ in presence of $ZnO.Cr_2O_3$

(B) Methane reacts with water vapours at $900^oC$ in presence of $Ni$ catalyst

(C) Reduction of $HCHO$ by $LiAlH_4$

(D) Reduction of $HCHO$ by aqueous $NaOH$

**13.** Action of water in the presence of sulphuric acid with the following alkenes

(i) $CH_3-CH=C<^{CH_3}_{CH_3}$ and

(ii) $CH_3-CH=CH_2$ gives

(A) $CH_3-CH_2-\underset{OH}{\underset{|}{C}}<^{CH_3}_{CH_3}$ and

(ii) $CH_3-\underset{OH}{\underset{|}{CH}}-CH_3$

(B) (i) $CH_3-\underset{OH}{\underset{|}{CH}}=CH<^{CH_3}_{CH_3}$ and

(ii) $CH_3-CH_2-CH_2OH$

(C) (i) $CH_3-\underset{OH}{\underset{|}{CH}}-CH$ $^{CH_3}_{CH_3}$ and

(ii) $CH_3-\underset{OH}{\underset{|}{CH}}-CH_3$

(D) (i) $CH_3-CH_2-\underset{OH}{\underset{|}{C}}<^{CH_3}_{CH_3}$ and

(ii) $CH_3-CH_2-CH_2OH$

**14.** From Williamson's synthesis preparation of which of following is possible

(A) Only symmetrical ethers

(B) Only symmetrical ethers

(C) Both types

(D) None of these

**15.** In the reaction $Ar-OH+Rx \xrightarrow{\text{alkali}} A, A$ is

(A) An aldehyde (B) An aryl chloride

(C) An ether (D) A ketone

## DPP-4

**1.** Which compound is formed when $CH_3OH$ reacts with $CH_3-Mg-X$

(A) Acetone (B) Alcohol

(C) Methane (D) Ethane

**2.** A compound $X$ of formula $C_3H_8O$ yields a compound $C_3H_6O$, on oxidation. To which of the following classes of compounds could $X$ being

(A) Secondary alcohol (B) Alkene

(C) Aldehyde (D) Tertiary alcohol

**3.** The boiling point of alcohol are …. than corresponding thiols

(A) More (B) Same

(C) Either of these (D) Less

**4.** Methyl alcohol can be distinguished from ethyl alcohol using

(A) Fehling solution

(B) Schiff's reagent

(C) Sodium hydroxide and iodine

(D) Phthalein fusion test

**5.** A compound $X$ with molecular formula $C_3H_8O$ can be oxidised to a compound $Y$ with the molecular formula $C_3H_6O_2$ $X$ is most likely to be

(A) Primary alcohol

(B) Secondary alcohol

(C) Aldehyde

(D) Ketone

**6.** An alcohol on oxidation is found to give $CH_3COOH$ and $CH_3CH_2COOH$. The structure of the alcohol is

(A) $CH_3CH_2CH_2OH$

(B) $(CH_3)_2C(OH)CH_2CH_3$

(C) $CH_3CH_2CHOHCH_3$

(D) $CH_3CH(OH)CH_2CH_2CH_3$

**7.** An organic liquid $A$ containing $C, H$ and $O$ has a pleasant odour with a boiling point of $78^oC$ On boiling $A$ with conc. $H_2SO_4$ a colourless gas is produced which decolourises bromine water and

alkaline $KMnO_4$. One mole of this gas also takes one mole of $H_2$. The organic liquid *A* is

(A) $C_2H_5Cl$ (B) $C_2H_5CHO$

(C) $C_2H_6$ (D) $C_2H_5OH$

**8.** An aromatic amine (A) was treated with alcoholic potash and another compound (*Y*) when foul smelling gas was formed with formula $C_6H_5NC$. *Y* was formed by reacting a compound (*Z*) with $Cl_2$ in the presence of slaked lime. The compound (*Z*) is

(A) $C_6H_5NH_2$ (B) $C_2H_5OH$

(C) $CH_3OCH_3$ (D) $CHCl_3$

**9.** Rectified spirit obtained by fermentation contains 4.5% of water. So in order to remove it, rectified spirit is mixed with suitable quantity of benzene and heated. Benzene helps because

(A) It is dehydrating agent and so removes water

(B) It forms the lower layer which retains all the water so that alcohol can be distilled off

(C) It forms an azeotropic mixture having high boiling point and thus allows the alcohol to distill over

(D) It forms low boiling azeotropic mixtures which distill over, leaving behind pure alcohol which can then be distilled

**10.** $C_6H_5OH + ClCOCH_3 \xrightarrow{\text{aq. } NaOH} C_6H_5OCOCH_3$ is an example of

(A) Dow's reaction

(B) Reimer-Tiemann reaction

(C) Schotten-Baumann reaction

(D) Kolbe's reaction

**11.** Ortho-nitrophenol is steam volatile whereas para-nitrophenol is not. This is due to

(A) Intramolecular hydrogen bonding present in ortho-nitrophenol

(B) Intermolecular hydrogen bonding

(C) Intramolecular hydrogen bonding present in para-nitrophenol

(D) None of these

**12.** Reaction of phenol with dil. $HNO_3$ gives

(A) *p* and *m*-nitrophenols

(B) *o*- and *p*-nitrophenols

(C) Picric acid

(D) *o*- and *m*-nitrophenols

**13.** Phenol is less acidic than

(A) Acetic acid (B) *p*-nitrophenol

(C) Both (A) and (B) (D) None of these

**14.** The strongest acid among the following aromatic compounds is

(A) *ortho*-nitrophenol

(B) *para*-chlorophenol

(C) *para*-nitrophenol

(D) *meta*-nitrophenol

**15.** Diazo-coupling is useful to prepare some

(A) Pesticides (B) Proteins

(C) Dyes (D) Vitamins

## DPP-5

**1.** Glycerol is used in the manufacture of

(A) Dynamite (B) Varnish

(C) Paints (D) Soft drinks

**2.** Glycerol as a triester present in

(A) Petroleum

(B) Kerosene

(C) Vegetable oil and fat

(D) Naphtha

**3.** In presence of air, fermentation of ethyl alcohol by azotobactor bacteria forms

(A) $CH_2 = CH_2$ (B) $C_2H_6$

(C) $CH_3CHO$ (D) $CH_3COOH$

**4.** Aspirin is also known as

(A) Methyl salicylic acid

(B) Acetyl salicylic acid

(C) Acetyl salicylate

(D) Methyl salicylate

**5.** Substances used in bringing down the temperature in high fevers are called

(A) Pyretics (B) Antipyretics

(C) Antibiotics (D) Antiseptics

**6.** When glycol is heated with dicarboxylic acid, the products are

(A) Polyesters

(B) Polyethers

(C) Polyethylene

(D) No reaction at all

**7.** Cresol is

(A) A mixture of three cresols with little phenol

(B) Used as dye for wood

(C) A soapy solution of cresols

(D) Having an aldehyde group

**8.** Phenol is used in the manufacture of

(A) Bakelite (B) Polystyrene

(C) Nylon (D) PVC

**9.** In cold countries ethylene glycol is added to water in the radiators to

(A) Bring down the specific heat of water

(B) Lower the viscosity

(C) Reduce the viscosity

(D) Make water a better lubricant

**10.** Power alcohol is

(A) An alcohol of 95% purity

(B) A mixture of petrol hydrocarbons and ethanol
(C) Rectified spirit
(D) A mixture of methanol and ethanol

**11.** 4-chloro-3, 5-dimethyl phenol is called
(A) Chloramphenicol (B) Paracetamol
(C) Barbital (D) Dettol

**12.** Alcoholic fermentation is brought about by the action of
(A) $CO_2$ (B) $O_2$
(C) Invertase (D) Yeast

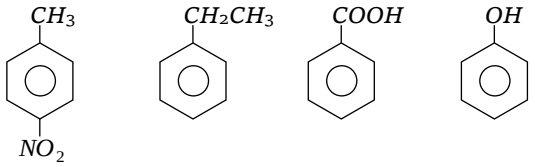
**13.** Rectified spirit is a mixture of
(A) 95% ethyl alcohol + 5% water
(B) 94% ethyl alcohol + 4.53% water
(C) 94.4% ethyl alcohol + 5.43 % water
(D) 95.57% ethyl alcohol + 4.43% water

**14.** Methyl alcohol is toxic. The reason assigned is
(A) It stops respiratory track
(B) It reacts with nitrogen and forms $CN^-$ in the lungs
(C) It increases $CO_2$ content in the blood
(D) It is a reduction product of formaldehyde

**15.** Glycerol is used
(A) As a sweetening agent
(B) In the manufacture of good quality soap
(C) In the manufacture of nitro glycerine

## POWER BOOSTER

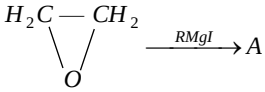
**1.** Which will undergo a Friedel-Craft's alkylation reaction



1 2 3 4

(A) 1, 2 and 4 (B) 1 and 3
(C) 2 and 4 (D) 1 and 2

**2.** The product '*A*' in the following reactionis




(A) $RCHOHR$ (B) $RCHOH \cdot CH_3$
(C) $R-CH_2-CH_2-OH$ (D) $\begin{matrix} R \\ R \end{matrix}\!>\!CHCH_2OH$

**3.** Glycerol boils at $290^oC$ with slight decomposition. Impure glycerine can be purified by
(A) Steam distillation
(B) Simple distillation
(C) Vacuum distillation
(D) Extraction with a solvent

**4.** Phenol $\xrightarrow{NaNO_2/H_2SO_4} B \xrightarrow{H_2O} C \xrightarrow{NaOH} D$
Name of the above reaction is
(A) Liebermann's reaction
(B) Phthalein fusion test
(C) Reimer-Tiemann reaction
(D) Schottenf-Baumann reaction

**5.** The correct order of boiling point for primary $(1^o)$, secondary $(2^o)$ and tertiary $(3^o)$ alcohols is
(A) $1^o > 2^o > 3^o$ (B) $3^o > 2^o > 1^o$
(C) $2^o > 1^o > 3^o$ (D) $2^o > 3^o > 1^o$

**6.** What will be the products of reaction if methoxybenzene reacts with *HI*
(A) Methyl alcohol (methanol) + iodobenzene
(B) Methyl iodide (iodomethane) + benzene
(C) Methyle iodide + phenol
(D) Methyl iodide + iodobenzene

**7.** Ethylene reacts with Baeyer's reagent to gives
(A) Ethane (B) Ethyl alcohol
(C) Ethylene glycol (D) None of these

**8.** Which of the following statements is correct regarding case of dehydration in alcohols
(A) Primary > Secondary
(B) Secondary > Tertiary
(C) Tertiary > Primary
(D) None of these

**9.** Oxiran is
(A) Ethylene oxide (B) Diethyl ether
(C) Ethyl glycolate (D) Glycolic ester

**10.** Propan-1-ol can be prepared from propene by alcohol
(A) $H_2O/H_2SO_4$
(B) $Hg(OAc)_2/H_2O$ followed by $NaBH_4$
(C) $B_2H_6$ followed by $H_2O_2$
(D) $CH_3CO_2H/H_2SO_4$

**11.** Distinction between primary, secondary and tertiary alcohol is done by
(A) Oxidation method
(B) Lucas test
(C) Victor Meyer method
(D) All of these

**12.** Oxidation of which of the following by air in presence of vanadium pentoxide gives phenol
(A) Toluene
(B) Benzene

(C) Benzaldehyde
(D) Phenyl acetic acid

**13.** The most suitable method of the separation of a 1 : 1 mixture of *ortho* and *para*nitrophenols is
(A) Distillation
(B) Sublimation
(C) Crystallization
(D) Chromatography

**14.** Which of the following does not form phenol or phenoxide
(A) $C_6H_5Cl$ (B) $C_6H_5COOH$
(C) $C_6H_5N_2Cl$ (D) $C_6H_5SO_3Na$

**15.** Which of the following will be obtained by keeping ether in contact with air for a long time
(A) $C_2H_5-O-CH(CH_3)-O-OH$
(B) $C_2H_5-OCH_2-OH$
(C) $C_2H_5-O-C_2H_5OH$
(D) $CH_3-O\,CH(CH_3)-O-OH$

**16.** When a mixture of ethanol and methanol is heated in the presence of concentrated $H_2SO_4$ the resulting organic product or products is/are
(A) $CH_3OC_2H_5$
(B) $CH_3OCH_3$ and $C_2H_5OC_2H_5$
(C) $CH_3OC_2H_5$ and $CH_3OCH_3$
(D) $CH_3OC_2H_5$, $CH_3OCH_3$ and $C_2H_5OC_2H_5$

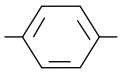
**17.** In the following groups

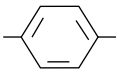
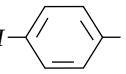
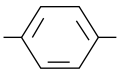
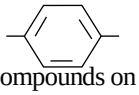
| $-OAc$ | $-OMe$ | $-OSO_2Me$ |
|---|---|---|
| I | II | III |

$-OSO_2CF_3$
IV

The order of leaving group ability is
(A) I > II > III > IV
(B) IV > III > I > II
(C) III > II > I > IV
(D) II > III > IV > I

**18.** Epoxides are
(A) Cyclic ethers
(B) Not ethers
(C) Aryl-alkyl ethers
(D) Ethers with another functional group

**19.** The reaction of $CH_3CH=CH\ OH$  with *HBr* gives

(A) $CH_3CHBrCH_2\ OH$ 
(B) $CH_3CH_2CHBr\ OH$ 
(C) $CH_3CHBrCH_2\ Br$ 
(D) $CH_3CH_2CHBr\ Br$ 

**20.** Which of the following compounds on boiling with $KMnO_4$ (alk.) and subsequent acidification will not give benzoic acid
(A) Benzyl alcohol (B) Acetophenone
(C) Anisole (D) Toluene

## Alcohols, Phenols an Ethers

## Previous Year Questions

**1.** The major organic products of reaction are $CH_3–O–CH(CH_3)_2 + HI \longrightarrow$

**[AIPMT-2006]**

(A) $CH_3OH + (CH_3)_2CHI$

(B) $ICH_2–O–CH(CH_3)_2$

(C) $CH_3—O—\underset{\displaystyle I}{\underset{|}{C}}(CH_3)_2$

(D) $CH_3I + (CH_3)_2CHOH$

**2.** In the reaction :

$CH_3–\underset{\displaystyle CH_3}{\underset{|}{CH}}–CH_2–O–CH_2–CH_3 + HI \rightarrow$ .....

which of following compounds will be formed :

**[AIPMT-2007]**

(A) $CH_3—\underset{\displaystyle CH_3}{\underset{|}{CH}}—CH_3 + CH_3—CH_2—OH$

(B) $CH_3—\underset{\displaystyle CH_3}{\underset{|}{CH}}—CH_2—OH + CH_3—CH_3$

(C) $CH_3—\underset{\displaystyle CH_3}{\underset{|}{CH}}—CH_2—OH + CH_3—CH_2—I$

(D) $CH_3—\underset{\displaystyle CH_3}{\underset{|}{CH}}—CH_2—I + CH_3–CH_2–OH$

**3.** $H_2COH.CH_2OH$ on heating with periodic acid gives :- **[AIPMT-2009]**

(A) $2\,\begin{matrix}H\\H\end{matrix}\!\!\diagdown\!C=O$ (B) $2CO_2$

(C) 2HCOOH (D) $\begin{matrix}CHO\\|\\CHO\end{matrix}$

**4.** Consider the following reaction,

ethanol $\xrightarrow{PBr_3}$ X $\xrightarrow{alc.\,KOH}$ Y $\xrightarrow[(ii)\,H_2O]{(i)\,H_2SO_4\ room\ temperature}$ Z ;

the product Z is :- **[AIPMT-2009]**

(A) $CH_3CH_2OH$

(B) $CH_2 = CH_2$

(C) $CH_3CH_2 – O – CH_2 – CH_3$

(D) $CH_3 – CH_2 – O – SO_3H$

**5.** Consider the following reaction :

Phenol $\xrightarrow[Zn\ dust]{}$ X $\xrightarrow[Anhydrous\ AlCl_3]{CH_3Cl}$ Y $\xrightarrow[\Delta]{Alkaline\ KMnO_4}$ Z

the product Z is :- **[AIPMT-2009]**

(A) Benzene

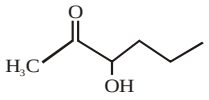
(B) Toluene

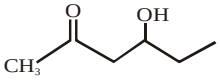
(C) Benzaldehyde

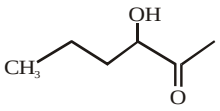
(D) Benzoic acid

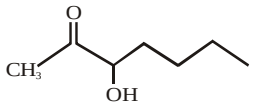
**6.** Which one of the following compounds will be most readily dehydrated :

**[AIPMT2010]**

(A) 

(B) 

(C) 

(D) 

**7.** In the following reactions,

(a) $CH_3–\underset{\displaystyle OH}{\underset{|}{CH}}–\underset{\displaystyle CH_3}{\underset{|}{CH}}–CH_3 \xrightarrow{H^+/Heat} \left[\begin{matrix}A\\Major\\product\end{matrix}\right] + \left[\begin{matrix}B\\Minor\\product\end{matrix}\right]$

(b) $A \xrightarrow[in\ absence\ of\ peroxide]{HBr,\ dark} \left[\begin{matrix}C\\Major\\product\end{matrix}\right] + \left[\begin{matrix}D\\Minor\\product\end{matrix}\right]$

the major products (A) and (C) are respectively:-

**[AIPMT Pre.-2011]**

(A) $CH_2=\underset{\displaystyle CH_3}{\underset{|}{C}}–CH_2–CH_3$ and $CH_2–\underset{\displaystyle Br}{\underset{|}{CH}}–CH_2–CH_3$

(B) $CH_3–\underset{\displaystyle CH_3}{\underset{|}{C}}=CH–CH_3$ and $CH_3–\underset{\displaystyle Br}{\underset{|}{\underset{\displaystyle CH_3}{\underset{|}{C}}}}–CH_2–CH_3$

(C) $CH_3–\underset{\displaystyle CH_3}{\underset{|}{C}}=CH–CH_3$ and $CH_3–\underset{\displaystyle Br}{\underset{|}{\underset{\displaystyle CH_3}{\underset{|}{CH}}}}–CH_2–CH_3$

(D) $CH_2=\underset{\displaystyle CH_3}{\underset{|}{C}}–CH_2–CH_3$ and $CH_3–\underset{\displaystyle Br}{\underset{|}{\underset{\displaystyle CH_3}{\underset{|}{C}}}}–CH_2–CH_3$

**8.** In the following sequence of reactions $CH_3–Br$

$\xrightarrow{KCN}$ A $\xrightarrow{H_3O^+}$ B $\xrightarrow[ether]{LiAlH_4}$ C,

the end product (C) is: **[AIPMT Pre-2012]**

(A) Acetaldehyde

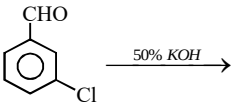
(B) Ethyl alcohol

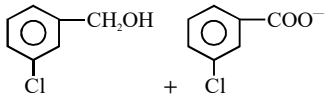
(C) Acetone

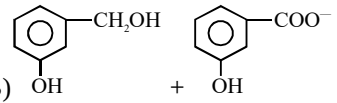
(D) Methane

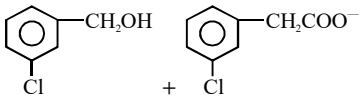
**9.** Predict the products in the given reaction.

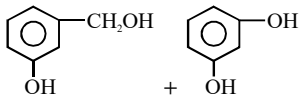
**[AIPMT Pre-2012]**




(A) 


(B) 


(C) 


(D) 


**10.** $CH_3CHO$ and $C_6H_5CH_2CHO$ can be distinguished chemically by :

**[AIPMT Pre-2012]**

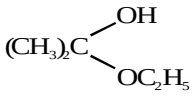
(A) Tollen's reagent test

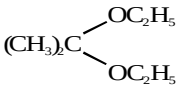
(B) Fehling solution test

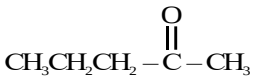
(C) Benedict test

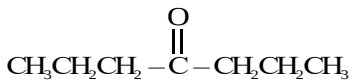
(D) Iodoform test

**11.** Acetone is treated with excess of ethanol in the presence of hydrochloric acid. The product obtained is: **[AIPMT Pre-2012]**

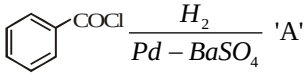
(A) 


(B) 


(C) 


(D) 


**12.** Consider the following reaction :




The product 'A' is : **[AIPMT Mains-2012]**

(A) $C_6H_5COCH_3$

(B) $C_6H_5Cl$

(C) $C_6H_5CHO$

(D) $C_6H_5OH$

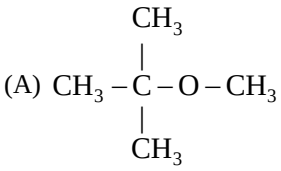
**13.** Number of iosmeric alcohols of molecular formula $C_6H_{14}O$ which give positive iodoform test is

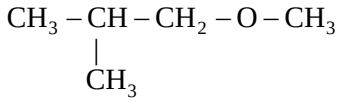
**[Karnataka NEET-2013]**

(A) three (B) four

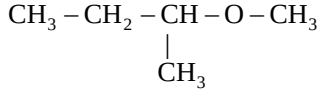
(C) five (D) two

**14.** Among the following ethers, which one will produce methyl alcohol on treatment with hot concentrated HI ? **[NEET-2013]**

(A) 


(B) 


(C) $CH_3 - CH_2 - CH_2 - O - CH_3$

(D) 


**15.** Which of the following will not be soluble in sodium hydrogen carbonate?

**[AIPMT-2014]**

(A) 2,4,6-Trinitrophenol

(B) Benzoic acid

(C) o-Nitrophenol

(D) Benzenesulphonic acid

**16.** Among the following sets of reactants which one produces anisole?

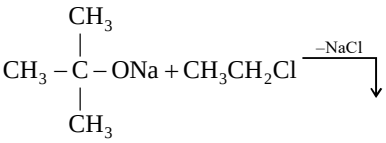
**[AIPMT-2014]**

(A) $CH_3CHO$; RMgX

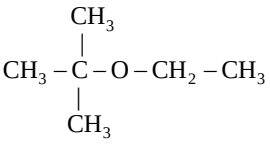
(B) $C_6H_5OH$; NaOH; $CH_3I$

(C) $C_6H_5OH$; neutral $FeCl_3$

(D) $C_6H_5CH_3$; $CH_3COCl$; $AlCl_3$

**17.** The reaction, 


willamson synth reaction RONa + R–Cl $\xrightarrow[\text{ether}]{-NaCl, Mg}$ ROR'




is called

**[AIPMT-2015, Cancelled]**

(A) Etard reaction

(B) Gattermann-Koch reaction
(C) Williamson synthesis
(D) Williamson continuous etherification process

**18.** Which of the following reaction(s) can be used for the preparation of alkyl halides? **[AIPMT-2015]**

(I) $CH_3CH_2OH + HCl \xrightarrow{anh.ZnCl_2}$

(II) $CH_3CH_2OH + HCl \longrightarrow$

(III) $(CH_3)_3COH + HCl \longrightarrow$

(IV) $(CH_3)_2CHOH + HCl \xrightarrow{anh.ZnCl_2}$

(A) (I) and (II) only
(B) (IV) only
(C) (III) and (IV) only
(D) (I), (III) and (IV) only

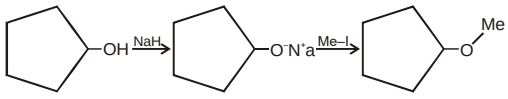
**19.** Reaction of phenol with chloroform in presence of dilute sodium hydroxide finally introduces which one of the following functional group? **[AIPMT-2015]**

(A) –COOH (B) $-CH\,Cl_2$
(C) –CHO (D) $-CH_2Cl$

**20.** Which of the following reagents would distinguish cis-cyclopenta-1,2-diol from the trans-isomer ? **[AIPMT-2016]**

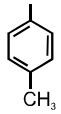
(A) Acetone
(B) Ozone
(C) $MnO_2$
(D) Aluminium isopropxide

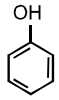
**21.** Can be classified as :- **[AIPMT-2016]**

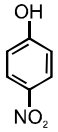


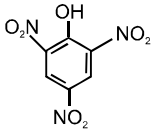

(A) Williamson ether synthesis reaction
(B) Alcohol formation reaction
(C) Dehydration reaction
(D) Williamson alcohol synthesis reaction

**22.** Which one is the most acidic compound? **[NEET-2017]**

(A) 


(B) 

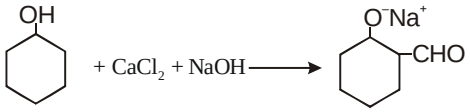

(C) 


(D) 


**23.** The heating of pheny1– methyl ethers with HI produces: **[NEET-2017]**

(A) ethylchlorides (B) iodobenzen
(C) phenol (D) benzene

**24.** In the reaction **[NEET 2018]**




the electrophile involved is

(A) formyl cation $\left(\overset{\oplus}{C}HO\right)$

(B) dichloromethyl anion $\left(\overset{\ominus}{C}HCl_2\right)$

(C) dichloromethyl cation $\left(\overset{\oplus}{C}HCl_2\right)$

(D) dichlorocarbene $(:CCl_2)$

**25.** The compound A on treatment with Na gives B, and with $PCl_5$ gives C. B and C react together to give diethyl ether. A, B and C are in the order. **[NEET 2018]**

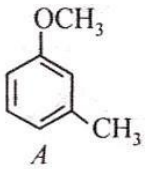
(A) $C_2H_5OH,\ C_2H_5Cl,\ C_2H_5ONa$

(B) $C_2H_5Cl,\ C_2H_6,\ C_2H_5OH$ C

(C) $C_2H_5OH,\ C_2H_6,\ C_2H_5Cl$

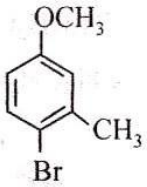
(D) $C_2H_5OH,\ C_2H_5ONa,\ C_2H_5Cl$

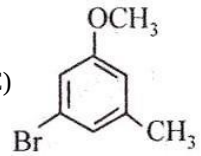
**26.** The major product obtained on the monobromination(with $Br_2$/FeBr) of the following compound *A* is **(2006)**




*A*

(A)


(B) 


(C) 


(D)


**27.** The major product formed in the following reaction **(2006)**

$CH_3CH(Cl)CH_2 - CH_2OH \xrightarrow{\text{aq. KOH}}$

(A) $CH_3CH = CH - CH_2OH$

(B) $CH_2 = CH - CH_2 - CH_2OH$

(C) $CH_3 - \underset{\underset{O - CH_2}{|}}{CH} - CH_2$

(D) $CH_3 - \underset{\underset{OH}{|}}{CH} - CH_2 - CH_2OH$

**28.** $CH_3OC_2H_5$ and $(CH_3)_3$ C – $OCH_3$ are treated withhydroiodic acid. The fragments after reactionsobtained are **(2007)**

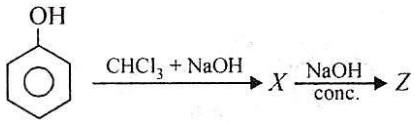
(A) $CH_3I + HOC_2H_5$; $(CH_3)_3C - I + HOCH_3$

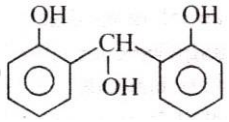
(B) $CH_3OH + C_2H_5I$; $(CH_3)_3Cl + HOCH_3$

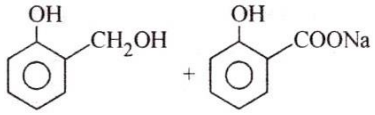
(C) $CH_3OH + C_2H_5$; $(CH_3)_3C - OH + CH_3I$

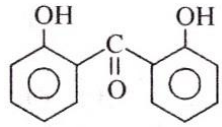
(D) $CH_3I + HOC_2H_5$; $CH_3I + (CH_3)_3 - C - OH$

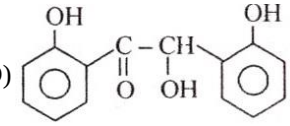
**29.** Identify Z in the reaction. **(2008)**




(A) 

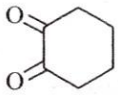

(B) 


(C) 


(D) 


**30.** Oxidation product 1,2-cyclopentanediol with $HIO_4$gives **(2008)**

(A) $H\underset{\underset{O}{||}}{C} - CH_2 - CH_2 - CH_2 - \underset{\underset{O}{||}}{C} - H$

(B) 


(C) $O = \underset{\underset{OH}{||}}{C} - CH_2 - CH_2 - CH_2 - \underset{\underset{OH}{||}}{C} - H$

(D) None of these

**31.** When phenol reacts with phthalic anhydride inpresence of $H_2SO_4$ and heated and hot reactionmixture is poured in NaOH solution, then productformed is **(2008)**

(A) alizarin

(B) methyl orange

(C) fluorescein

(D) phenolphthalein

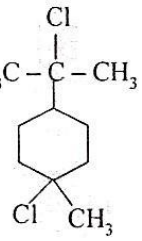
**32.** In Oppenauer's oxidation, **(2009)**

(A) Secondary alcohol is oxidised to carboxylic acid, in acetone solvent using aluminiumtertiary butoxide

(B) Secondary alcohol is oxidised to carboxylic acid without affecting the $C = C$ or $C \equiv C$ bond by aluminium tertiary butoxide in acetone solvent

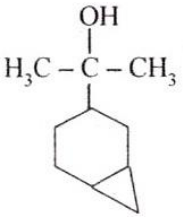
(C) Secondary alcohol is oxidised to ketonewithout affecting $C = C$ or $C \equiv C$ bond byaluminium tertiaty butoxide

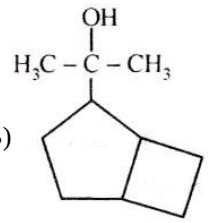
(D) Secondary alcohol is oxidised to ketone bychromic acid - pyridine complex.

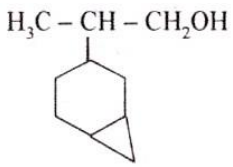
**33.** $A\ (C_{10}H_{18}O) \xrightarrow{HCl}$ 


**(2010)**

Degree of unsaturation of *A*= 2, it contains nodouble or triple bonds.

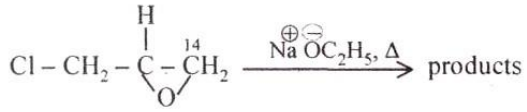
(A) 

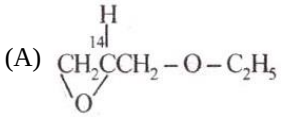

(B) 

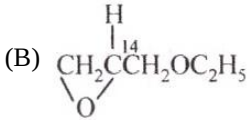

(C) 

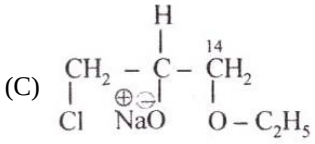

(D) none of these

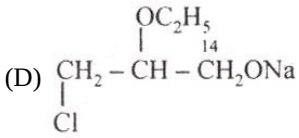
**34.** The major product of the following reaction is **(2010)**



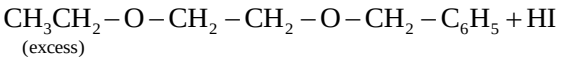
(A) 

(B) 

(C) 

(D) 

**35.** Find the product for



**(2011)**

(A) $HO–CH_2CH_2OH$, $C_6H_5CH_2–I$, $CH_3CH_2–I$

(B) $C_6H_5CH_2–OH$, $CH_3CH_2–I$, $I–CH_2CH_2–OH$

(C) $I–CH_2CH_2–I$, $C_6H_5CH_2–I$, $CH_3CH_2–OH$

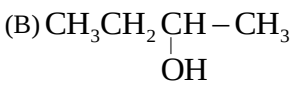
(D) $HO–CH_2CH_2–OH$, $C_6H_5CH_2–I$, $CH_3CH_2–OH$

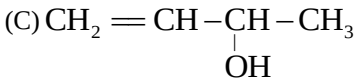
**36.** But-1-ene $\xrightarrow[H_3O^+]{(CH_3COO)_2Hg}$ ?

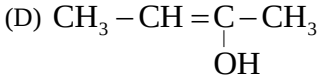
The product in the above reaction is

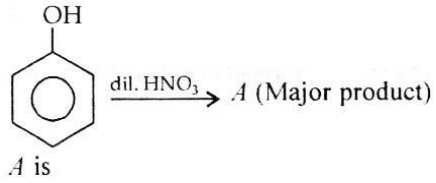
**(2012)**

(A) $CH_3CH_2CH_2CH_2OH$

(B) 

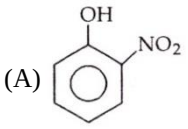
(C) 

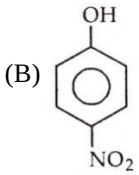
(D) 

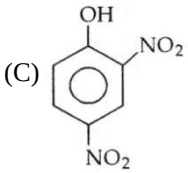
**37.** 

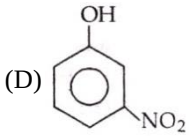
*A* is

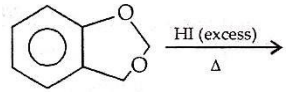
**(2013)**

(A) 

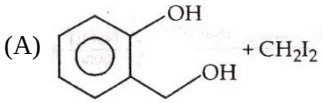
(B) 

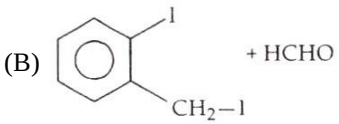
(C) 

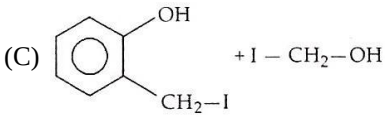
(D) 

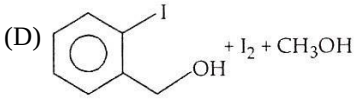
**38.** 

**(2013)**

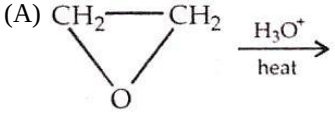
(A) 

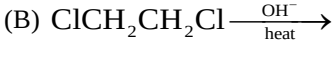
(B) 

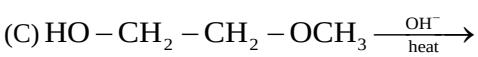
(C) 

(D) 

**39.** Which of the following reaction will not produce ethylene glycol? **(2013)**

(A) 

(B) 

(C) 

(D)

**40.** A compound containing two –OH groups attached with one carbon atom is unstable but which one of

the following is stable?
**(2013)**

(A) $CH_3CH(OH)_2$

(B) $CH_3-C(OH)_2-OH$

(C) $Cl_3CH(OH)_2$

(D) None of these

**41.** During the dehydration of alcoholsto alkenesbyheating with conc.$H_2SO_4$, the initiating step is **(2014)**

(A) elimination of water

(B) protonation of an alcohol molecule

(C) formation of an ester

(D) formation of carbocation.

**42.** Isopropyl benzene on air oxidation in the presence of dilute acid gives **(2015)**

(A) $C_6H_5COOH$ (B) $C_6H_5COCH_3$

(C) $C_6H_5CHO$ (D) $C_6H_5OH$

**43.** The reaction, $C_6H_5ONa + CO_2 + H_2O \rightarrow C_6H_5OH + NaHCO_3$ Suggests that **(2016)**

(A) phenol is a stronger acid than carbonicacid

(B) carbonic acid is a stronger acid thanphenol

(C) water is a stronger acid than phenol

(D) None of these.

**44.** The synthesis of alkyl fluorides is best accomplished by : **(2017)**

(A) Finkelstein reaction

(B) Swarts reaction

(C) Free radical fluorination

(D) Sandmeyer's reaction

**45.** Aldol condensation will not be observed in **(2017)**

(A) chloral

(B) henylacetaldehyde

(C) hexanal

(D) nitromethane

**46.** A triglyceride can have how many different acyl groups? **(2017)**

(A) 3 (B) 2

(C) 1 (D) 4

**47.** The ether that undergoes electrophilic substitution reactions is **(2017)**

(A) $CH_3OC_2H_5$ (B) $C_6H_5OCH_3$

(C) $CH_3OCH_3$ (D) $C_2H_5OC_2H_5$

**48.** In the reaction

$$\text{Phenol} \xrightarrow{NaOH} (A) \xrightarrow[140^\circ]{Co_2+HCl} (B)$$, here B is **(2017)**

(A) benzaldehyde (B) chlorobenzene

(C) benzoic acid (D) salicylic acid

**49.** In the Victor-meyer's test, the colour given by 1°, 2° and 3° alcohols are respectively. **(2017)**

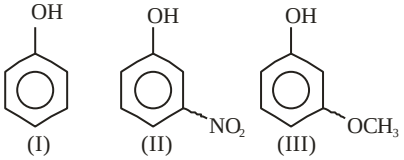
(A) red, colourless, blue

(B) red, blue, colourless

(C) blue, red, violet

(D) red, blue, violet

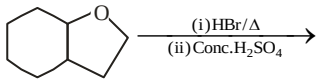
**50.** Correct order of acidic strength **(2018)**



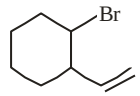

(I) (II) (III)

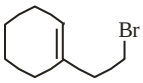
(A) I > II > III (B) II > III > I

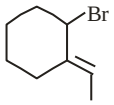
(C) I > III > II (D) II >II > I

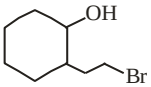
**51.** 

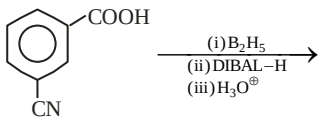

**(2018)**

(A) 

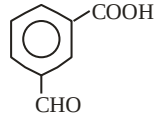

(B) 

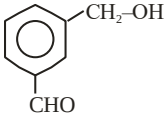

(C) 

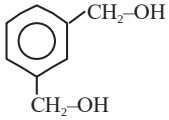

(D) 

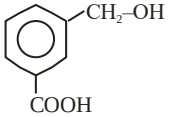

**52.** 

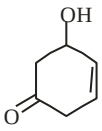

**(2018)**

(A) 


(B) 


(C) 


(D) 

**53.**  Give IUPAC Name **(2018)**

(A) 5-Hydroxy cyclohex-3-en-1-one
(B) 3-Hydroxy cyclohex-5-en-1-one
(C) 8-Hydroxy cyclohex-3-en-1-one
(D) 7-Hydroxy cyclohex-5-en-1-one

| DPP-1 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| B | D | C | D | A | C | C | B | C | B |
| **11** | **12** | **13** | **14** | **15** | | | | | |
| B | C | C | A | C | | | | | |

| DPP-2 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| C | C | B | C | D | C | C | D | A | B |
| **11** | **12** | **13** | **14** | **15** | | | | | |
| C | C | B | B | D | | | | | |

| DPP-3 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| B | B | D | C | D | C | A | A | B | C |
| **11** | **12** | **13** | **14** | **15** | | | | | |
| B | A | A | C | C | | | | | |

| DPP-4 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| C | A | A | C | A | D | D | B | D | C |
| **11** | **12** | **13** | **14** | **15** | | | | | |
| A | B | C | C | C | | | | | |

| DPP-5 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| A | C | D | B | B | A | A | A | A | B |
| **11** | **12** | **13** | **14** | **15** | | | | | |
| D | D | D | B | D | | | | | |

| POWER BOOSTER | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| C | C | C | A | A | C | C | C | A | C |
| **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** |
| D | B | A | B | A | D | B | A | B | C |

| Previous Year Questions | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| A | C | C | C | B | B | C | D | A | D |
| **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** |
| B | C | B | A | C | B | C | D | A | B |
| **21** | **22** | **23** | **24** | **25** | **26** | **27** | **28** | **29** | **30** |
| A | D | C | D | D | B | D | A | B | A |
| **31** | **32** | **33** | **34** | **35** | **36** | **37** | **38** | **39** | **40** |
| D | C | A | B | A | B | A | B | C | C |
| **41** | **42** | **43** | **44** | **45** | **46** | **47** | **48** | **49** | **50** |
| B | D | A | B | A | A | B | D | B | B |
| **51** | **52** | **53** | | | | | | | |
| A | B | A | | | | | | | |