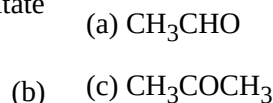
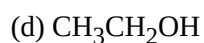
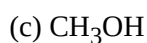
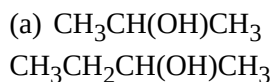
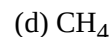
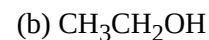


1.

Which of the following will not form a yellow precipitate on heating with an alkaline solution of iodine?



Ether

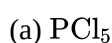


7.

Which one of the following on oxidation gives a ketone?

2.

n-propyl alcohol and iso-propyl alcohol can be chemically distinguished by which reagent



(b) reduction

(c) oxidation with potassium dichromate

(d) ozonolysis

(a) Primary alcohol

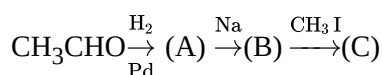
(b) Secondary alcohol

(c) Tertiary alcohol

(d) All of these

8.

In the following sequence the product (C) is:



(a) alcohol

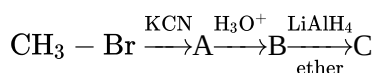
(b) ether

(c) alkene

(d) none of these

3.

In the following sequence of reactions,



the end product C is

(a) acetone

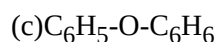
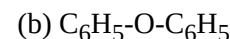
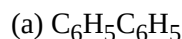
(b) methane

(c) acetaldehyde

(d) ethyl alcohol

9.

The formula of phenoxy benzene is :



(d) none of these

4.

Lucas reagent is

(a) conc.  $\text{HCl}$  and anhy.  $\text{ZnCl}_2$

(b) conc.  $\text{HNO}_3$  and anhy.  $\text{ZnCl}_2$

(c) conc.  $\text{HCl}$  and hydrous  $\text{ZnCl}_2$

(d) conc.  $\text{HNO}_3$  and hydrous  $\text{ZnCl}_2$

10.

Ether and benzene can be separated by:-

(1) Filtration

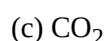
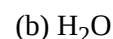
(2) Distillation

(3) Crystallization

(4) Sublimation

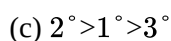
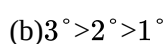
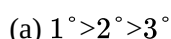
11.

Primary alcohols can be obtained from the reaction of the  $\text{RMgX}$  with:



5.

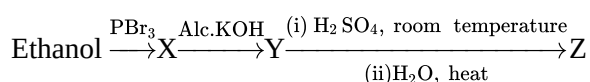
The decreasing order of boiling points of  $1^\circ, 2^\circ, 3^\circ$  alcohol is:



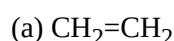
(d) none of these

12.

Consider the following reaction,

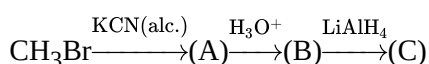


The product Z is



6.

The end product of the following sequence is:



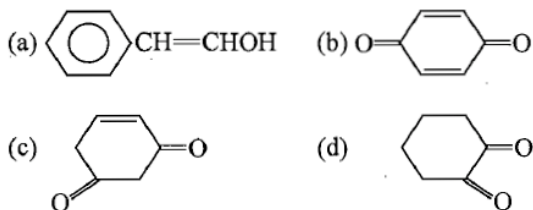
- $\text{CH}_3\text{CH}_2\text{OCH}_2\text{CH}_3$   
 (c)  $\text{CH}_3\text{CH}_2\text{OSO}_3\text{H}$   
 (d)  $\text{CH}_3\text{CH}_2\text{OH}$
13. Glycol condenses with ketones to give:  
 (a) cyclic acetals (b) cyclic ketals  
 (c) acetaldehyde (d) oxalic acid
14. Identify Z in the following series,  

$$\text{CH}_3-\text{CH}_2-\text{CH}_2\text{OH} \xrightarrow[160-180^\circ\text{C}]{\text{conc. H}_2\text{SO}_4} \text{X} \xrightarrow[\text{2. NaNH}_2]{\text{Br}_2} \text{Y} \xrightarrow[2. \text{NaNH}_2]{\text{1. Alc. KOH}} \text{Z}$$
 (a)  $\text{CH}_3-\text{CH}(\text{NH}_2)-\text{CH}_2(\text{NH}_2)$  (b)  $\text{CH}_3-\text{CH}(\text{OH})-\text{CH}_2(\text{OH})$   
 (c)  $\text{CH}_3-\text{C}(\text{OH})=\text{CH}_2$  (d)  $\text{CH}_3-\text{C}\equiv\text{CH}$
15. Ethyl propanoate on reduction with  $\text{LiAlH}_4$  yields:  
 (a) methanol  
 (b) ethanol and propanol  
 (c) propane  
 (d) mixture of ethanol and methanol
16. An alcohol on oxidation is found to give  $\text{CH}_3\text{COOH}$  and  $\text{CH}_3\text{CH}_2\text{COOH}$ . The alcohol is:  
 (a)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{OH}$   
 (b)  $(\text{CH}_3)_2\text{C}(\text{OH})\text{CH}_2\text{CH}_3$   
 (c)  $\text{CH}_3(\text{CH}_2)_2\text{CHOH}$   
 (d)  $\text{CH}_3\text{CH}(\text{OH})\text{CH}_2\text{CH}_2\text{CH}_3$
17. Propene,  $\text{CH}_3-\text{CH}=\text{CH}_2$  can be converted into 1-propanol by oxidation. Indicate which set of reagents amongst the following is ideal to affect the above conversion?  
 (a)  $\text{KMnO}_4$  (alkaline)  
 (b) Osmium tetroxide ( $\text{OsO}_4/\text{CH}_2\text{Cl}_2$ )  
 (c)  $\text{B}_2\text{H}_6$  and alk  $\text{H}_2\text{O}_2$   
 (d)  $\text{O}_3/\text{Zn}$
18. Which is not an alcohol?  
 (a)  $\text{CH}_2=\text{CHCH}_2\text{OH}$   
 $\text{CH}_2\text{OHCH}_2\text{OH}$  (b)  
 (c)  $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$  (d)  $\text{C}_6\text{H}_5\text{OH}$
19. Rectified spirit contains:  
 (a) 75.0 % alcohol (b) 85.5% alcohol  
 (c) 95.6 % alcohol (d) 100.0% alcohol
20. Isopropyl alcohol and n-propyl alcohol are:  
 (a) position isomers (b) chain isomers  
 (c) functional isomers (d) none of these
21. Fenton's reagent is:  
 (a)  $\text{H}_2\text{O} + \text{FeSO}_4$  (b)  $\text{H}_2\text{O}_2 + \text{FeSO}_4$   
 (c)  $\text{H}_2\text{O}_2 + \text{ZnSO}_4$  (d)  $\text{NaOH} + \text{FeSO}_4$
22. In the following sequence of reactions,  

$$\text{CH}_3-\text{Br} \xrightarrow{\text{KCN}} \text{A} \xrightarrow[\text{ether}]{\text{H}_3\text{O}^+} \text{B} \xrightarrow{\text{LiAlH}_4} \text{C}$$
 the end product C is  
 (a) acetone (b) methane  
 (c) acetaldehyde (d) ethyl alcohol
23. Ethylene oxide when treated with Grignard reagent yields  
 (a) secondary alcohol (b) tertiary alcohol  
 (c) cyclopropyl alcohol (d) primary alcohol
24. The general molecular formula, which represents the homologous series of alkanols is  
 (a)  $\text{C}_n\text{H}_{2n}\text{O}_2$  (b)  $\text{C}_n\text{H}_{2n}\text{O}$   
 (c)  $\text{C}_n\text{H}_{2n+1}\text{O}$  (d)  $\text{C}_n\text{H}_{2n+2}\text{O}$

25.

Tautomerism is not exhibited by:



26.

The reaction products of  $C_6H_5CH_3 + HI \xrightarrow{A}$

1.  $C_6H_5OH + CH_3I$
2.  $C_6H_5I + CH_3OH$
3.  $C_6H_5CH_3 + HOI$
4.  $C_6H_6 + CH_3OI$

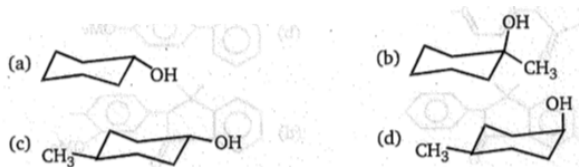
27.

The Strongest acid among the following aromatic compounds is

1. p-chlorophenol
2. p-nitrophenol
3. m-nitrophenol
4. o-nitrophenol

28.

Which of the following react with HBr at faster rate?



29.



Above conversion can be done by:

- (a)  $NaBH_4$
- (b)  $LiAlH_4$
- (c) PCC
- (d)  $KMnO_4$

30.

Which are not cleaved by  $HIO_4$ ?

- I : glycerol  
II : glycol  
III: 1, 3-propanediol  
IV: methoxy-2-propanol

- (a) I, II, III, IV
- (b) I, II
- (c) II, III
- (d) III, IV

31.

Which of these is a reducing agent ?

- (a)  $CrO_3/H^+$
- (b)  $KMnO_4$
- (c)  $LiAlH_4$
- (d)  $O_3$

32.

Glycerol has:

- (a) 3 primary alcoholic groups
- (b) 3 secondary alcoholic groups
- (c) 1 primary alcoholic group and 2 secondary alcoholic groups
- (d) 2 primary alcoholic groups and 1 secondary alcoholic group

33.

Wood spirit is:

- (a)  $CH_3OH$
- (b)  $C_2H_5OH$
- (c)  $CH_3CH_2CH_2OH$
- (d) none of these

34.

Phenol is:

- (a) a base weaker than  $NH_3$
- (b) an acid stronger than carbonic acid
- (c) an acid weaker than carbonic acid
- (d) neutral

35.

Purity of ether before using it as anaesthetic agent is tested by :-

- (a)  $KI + starch$

- (b)  $\text{CuSO}_4$   
(c)  $\text{H}_2\text{SO}_4$   
(d) none of these

36.

An organic compound A reacts with  $\text{PCl}_5$  to give B. The compound B with sodium metal gives *n*-butane. Thus, A and B are:

- (a)  $\text{C}_2\text{H}_5\text{OH}$  and  $\text{C}_2\text{H}_5\text{Cl}$   
(b)  $\text{C}_2\text{H}_5\text{Cl}$  and  $\text{C}_2\text{H}_5\text{ONa}$   
(c)  $\text{C}_3\text{H}_7\text{OH}$  and  $\text{CH}_3\text{CH}_2\text{CH}_2\text{OCl}$   
(d)  $\text{C}_4\text{H}_9\text{OH}$  and  $\text{C}_4\text{H}_9\text{OCl}$

37.

Which of the following undergoes dehydration most readily?

- (a) 1-phenyl-1-butanol  
(b) 1-phenyl-2-butanol  
(c) 2-phenyl-2-butanol  
(d) 2-phenyl-1-butanol

38.

The enzyme which can catalyse the conversion of glucose to ethanol is:

- (a) zymase  
(b) diastase  
(c) maltase  
(d) invertase

39.

Phenol on oxidation gives chloranil. The oxidant used is:

- (a)  $\text{K}_2\text{S}_2\text{O}_8$   
(b)  $\text{KMnO}_4$   
(c)  $\text{KClO}_3 + \text{HCl}$   
(d) none of these

40.

A characteristic group test for phenolic gp. is:

- (a) Liebermann's nitroso reaction  
(b) coupling with diazonium salt  
(c) aqueous  $\text{FeCl}_3$   
(d) all of the above

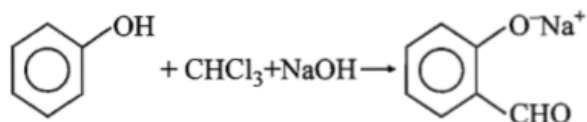
41.

Phenol is weakly acidic but does not react with  $\text{NaHCO}_3$

like carboxylic acids hence:-

- (a) phenol is weaker than carbonic acid  
(b) phenol is stronger than carbonic acid  
(c) phenol is stronger than carboxylic acid  
(d) none of the above

42.



The electrophile involved in the above reaction is:

- (a) dichloromethyl cation ( $\text{CHCl}_2^+$ )  
(b) dichlorocarbene ( $:\text{CCl}_2$ )  
(c) trichloromethyl anion ( $\text{CCl}_3^-$ )  
(d) formyl cation ( $\text{CHO}^+$ )

43.

On boiling with concentrated hydrobromic acid phenyl ethyl ether yields:-

- (a) phenol and ethyl bromide  
(b) bromobenzene and ethanol  
(c) phenol and ethane  
(d) bromobenzene and ethane

44.

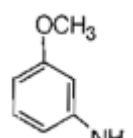
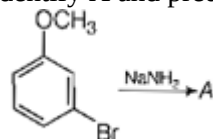
An organic compound A reacts with sodium metal and forms B. On heating with conc.  $\text{H}_2\text{SO}_4$ , A gives diethyl ether. So A and B are

[AFMC 1998]

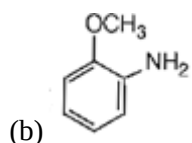
- (a)  $\text{C}_3\text{H}_7\text{OH}$  and  $\text{CH}_3\text{ONa}$   
(b)  $\text{CH}_3\text{OH}$  and  $\text{CH}_3\text{ONa}$   
(c)  $\text{C}_4\text{H}_9\text{OH}$  and  $\text{C}_4\text{H}_9\text{ONa}$   
(d)  $\text{C}_2\text{H}_5\text{OH}$  and  $\text{C}_2\text{H}_5\text{ONa}$

45.

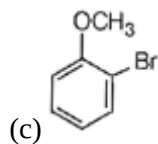
Identify A and predict the type of reactions



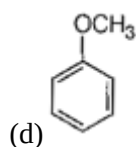
- (a) and substitution reaction



and elimination addition reaction



and cine substitution reaction



and cine substitution reaction

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