

JEE MAIN : CHAPTER WISE TEST-8

SUBJECT :- CHEMISTRY

CLASS :- 12th

CHAPTER :- ALCOHOL PHENOL ETHER

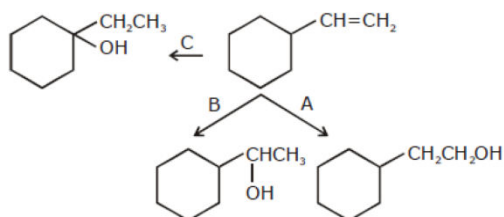
DATE.....

NAME.....

SECTION.....

(SECTION A)

1. Which among the following statement(s) about ether's incorrect?
 (A) peroxide is obtained in presence of air
 (B) Ethers are weakly acidic
 (C) Ethers form oxonium salt
 (D) Ethers form stable complexes with Lewis acids



2.

Select schemes A, B, C out of -
 I. Acid catalysed hydration
 II. HBO

III. Oxymercuration-demercuration

(A) I in all cases (B) I, II, III

(C) II, III, I (D) III, I, II

3. The solubility of lower alcohols in water is due to-

(A) Formation of hydrogen bond between alcohol and water molecules
 (B) Hydrophobic nature of alcohol
 (C) Increases in boiling points
 (D) None of these

4. 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

5. **Statement-1** : p-Hydroxybenzoic acid has a lower boiling point than o-hydroxybenzoic acid.

Statement-2 : o-Hydroxybenzoic acid has intramolecular hydrogen bonding.

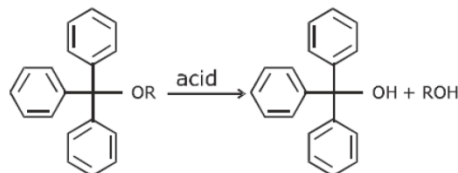
(A) Statement-1 is true, Statement-2 is True; Statement-2 is a correct explanation for Statement-1

(B) Statement-1 is True, Statement-2 is True; Statement-2 is NOT a correct explanation for Statement-1.

(C) Statement-1 is True, Statement-2 is false.

(D) Statement-1 is False, Statement-2 is True.

6. The acidic hydrolysis of ether (X), shown below is fastest when



(A) One phenyl group is replaced by a methyl group.

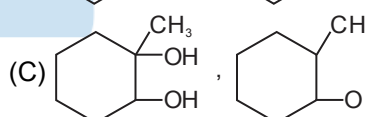
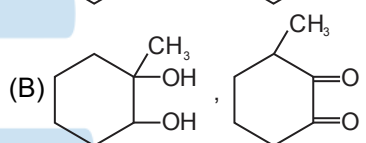
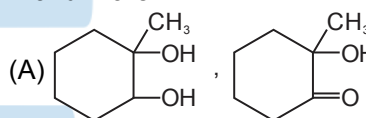
(B) One phenyl group is replaced by a paramethoxyphenyl group.

(C) Two phenyl groups are replaced by two paramethoxyphenyl groups.

(D) No structural change is made to X.

7. A $\xrightarrow[\text{AcOH}]{\text{CrO}_3}$ B,

A and B are -



(D) no formation of A and B

8. A water soluble $C_6H_{14}O_2$ compound is oxidized by lead tetraacetate (or periodic acid) to a single C_3H_6O carbonyl compound. Which of the following would satisfy this fact ?

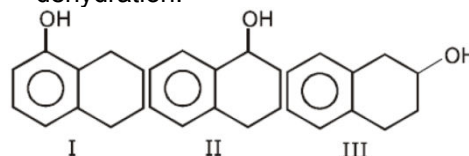
(A) meso-2, 3-Dimethoxy butane

(B) 1,2-Diethoxy ethane

(C) meso-2,5-Hexanediol

(D) meso-3,4-Hexanediol

9. Compare the rate of acid catalyst dehydration.

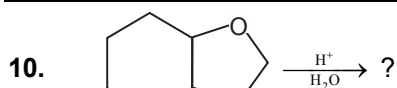


(A) I > II > III

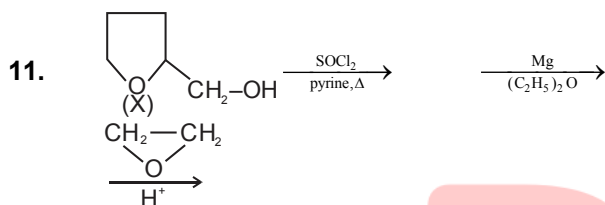
(B) II > III > I

(C) III > II > I

(D) II > I > III



- (A)
- (B)
- (C)
- (D)



Product of the reaction is -

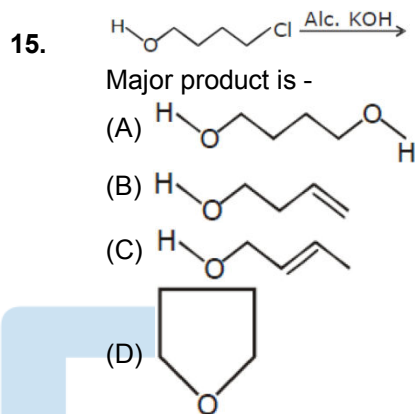
- (A)
- (B)
- (C)
- (D)

12. A $C_7H_{14}O$ optically active alcohol is oxidized by Jones' reagent to an optically inactive (achiral) ketone. Which of the following compounds meets these facts?

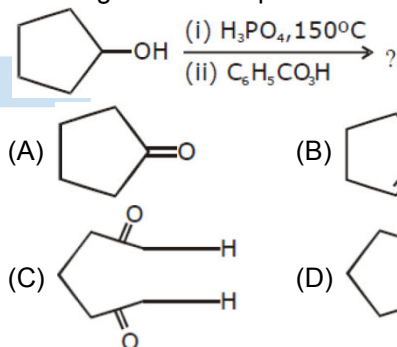
- (A)
- (B)
- (C)
- (D)

13. Ethanol on reaction with acetic anhydride gives
 (A) Acetic ester
 (B) Formic ester
 (C) Ethanoic acid
 (D) Acetic ester and Ethanoic acid both

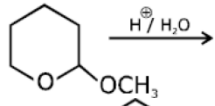
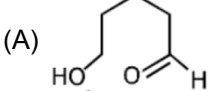
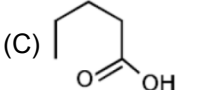
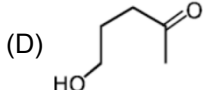
14. Glycerol $\xrightarrow[\Delta]{KHSO_4}$ A $\xrightarrow{LiAlH_4}$ B
 A and B are
 (A) Acrolein, allyl alcohol
 (B) Glyceryl sulphate, acrylic acid
 (C) Allyl alcohol, acrolein
 (D) Only acrolein (B is not formed)



16. What will be the chief products from the following reaction sequence?



17. Which of the following reagents would be best for oxidizing a 1°-alcohol to an aldehyde?
 (A) H_3PO_4
 (B) PCC in CH_2Cl_2
 (C) Jones' reagent (H_2CrO_4)
 (D) OsO_4
18. In Williamson's synthesis of ethers of ethers, which one of the following is not used?
 (A) Ethyl bromide
 (B) Tert-butyl chloride
 (C) Sodium ethoxide
 (D) Sodium tert-butoxide

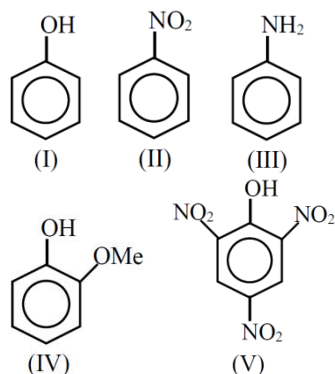
19. 
- (A)  (B) $\text{CH}_3\text{CH}_2\text{-OH}$
- (C)  (D) 
20. Match the column.
Column-I
 (i) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CN}$
 (ii) $\text{CH}_3\text{CH}_2\text{OCOCH}_3$
 (iii) $\text{CH}_3\text{-CH=CH-CH}_2\text{OH}$
 (iv) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{NH}_2$ (s)

Column-II

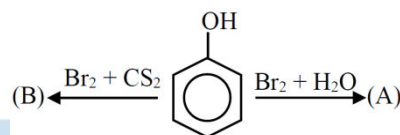
- (P) Reduction with Pd-C/H_2
 (Q) Reduction with SnCl_2/HCl
 (R) Development of foul smell on treatment with chloroform and alcoholic KOH
 (S) Reduction with diisobutylaluminium hydride (DIBAL-H)
 (T) Alkaline hydrolysis
 (A) i \rightarrow Q, S, T ; ii \rightarrow S, T ; iii \rightarrow Q ; iv \rightarrow P
 (B) i \rightarrow P, T ; ii \rightarrow R, S, T ; iii \rightarrow P ; iv \rightarrow R
 (C) i \rightarrow P, Q, T ; ii \rightarrow Q, T ; iii \rightarrow P ; iv \rightarrow R
 (D) i \rightarrow Q, S, T ; ii \rightarrow S, T ; iii \rightarrow P ; iv \rightarrow R

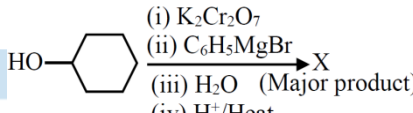
(SECTION B)

21. Isopropyl benzene $\xrightarrow{\text{O}_2} \text{X} \xrightarrow[\text{H}_2\text{O}]{\text{H}^+} \text{Y} + \text{Z}$
 mass of compound Z _____ g/mole.
22. The number of moles of Grignard's reagent required to prepare one molecule of tertiary alcohol from one mole of acetyl chloride is.
23. Total many number of test which can be used to distinguished between Methyl alcohol and ethyl alcohol
 (i) Fehling solution
 (ii) Schiff's reagent
 (iii) Sodium hydroxide and iodine
 (iv) Reaction with sodium metal
24. How many alcohols give same alkene on reaction with conc. H_2SO_4 _____.
25. How many may undergoes Reimer-Tiemann reaction?

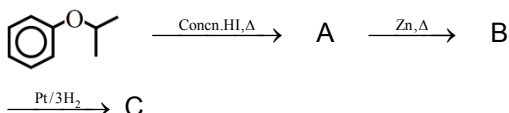


26. How many Bromine present in product A and B (A + B)



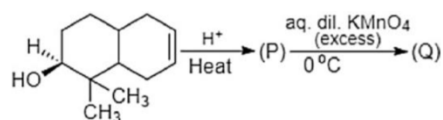
27. 

The number of sp^2 hybridised carbon(s) compound X is _____.

28. 

How many tetrahedral carbon atom present in compound C _____.

29. The number of the hydroxyl group(s) in Q is _____.



30. How many substituent will increase the acidity of alcohol _____.
 $-\text{NO}_2$, $-\text{CH}_3$, $-\text{O-CH}_3$, $-\text{Br}$, $-\text{CHO}$