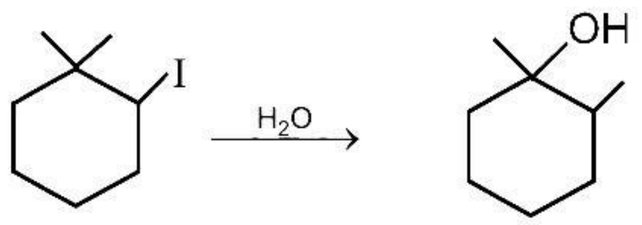
DPP No: 23

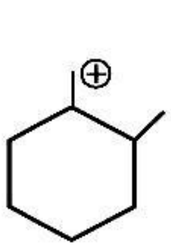
Maximum Time
50 Min

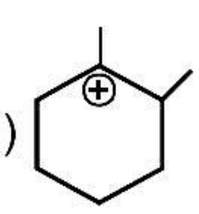
Chemistry
TARGET
JEE-MAINS

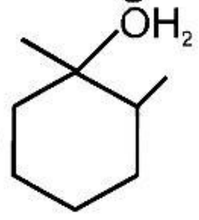
SYLLABUS : Alcohol, Phenol, Ether

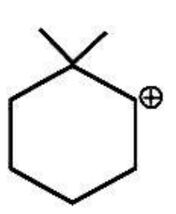
1. Which of the following is not expected to be intermediate of the following reaction ?

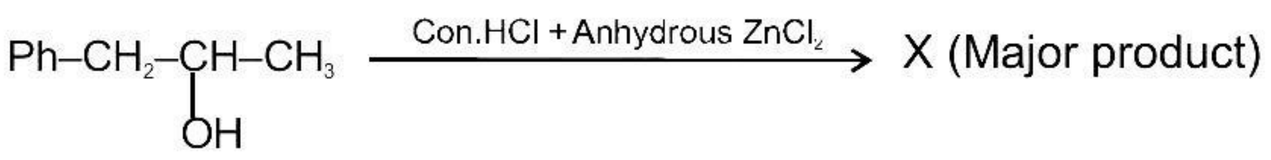


(A) 

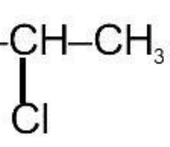
(B) 

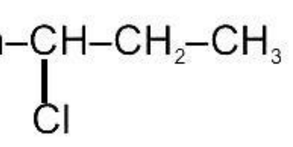
(C) 

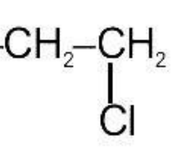
(D) 

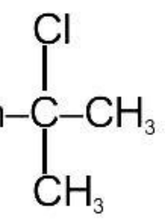
2. 

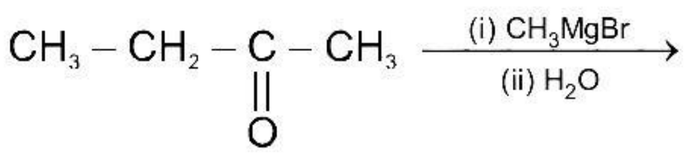
X is :

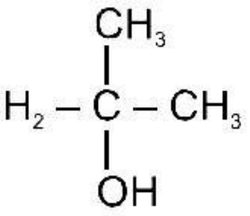
(A) 

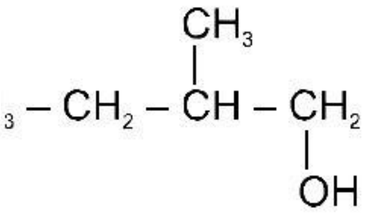
(B) 

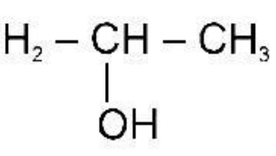
(C) 

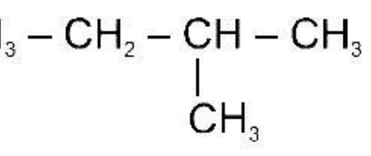
(D) 

3. 

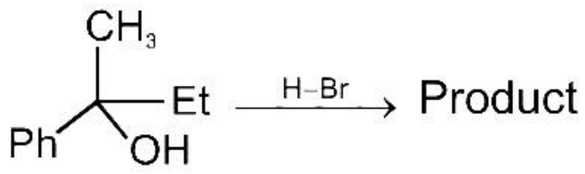
(A) 

(B) 

(C) 

(D) 

4. Which describes the best stereochemical aspects of the following reaction ?



(A) Inversion of configuration occurs at the carbon undergoing substitution.

(B) Retention of configuration occurs at the carbon undergoing substitution.

(C) Racemization occurs at the carbon undergoing substitution.

(D) The carbon undergoing substitution is not stereogenic.

5. Ethylene glycol with PCl_5 gives –

(A) Ethylene chloride (B) Ethyl chloride

(C) 1, 1–Dichloro ethane (D) Oxyrane

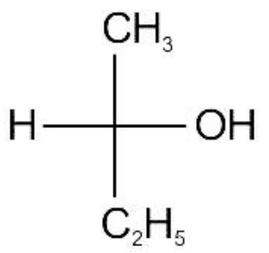
6. $CH_3(CH_2)_2CH_2OH \xrightarrow{HBr} X,$

1–butanol

Identify X and the mechanism of the reaction

(A) $CH_3 - CH_2 - CH_2 - CH_2 - Br$ & S_N1 (B) $CH_3 - CH_2 - CH_2 - CH_2 - Br$ & S_N2

(C) $CH_3 - \underset{\underset{Br}{|}}{CH} - CH_2 - CH_3$ & S_N1 (D) $CH_3 - \underset{\underset{Br}{|}}{CH} - CH_2 - CH_3$ & S_N2

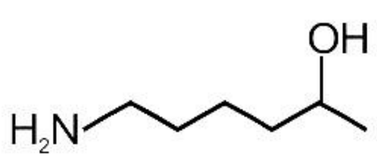
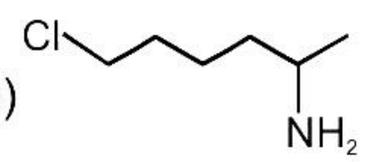
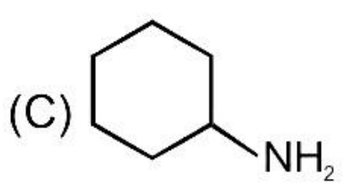
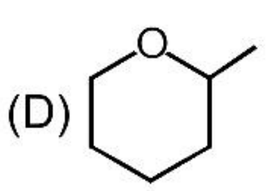
7.  $\xrightarrow{PCl_5}$ X ; (X) is

(D-2-Butanol)

(A) S-2-Chlorobutane (B) R - 2-Chlorobutane

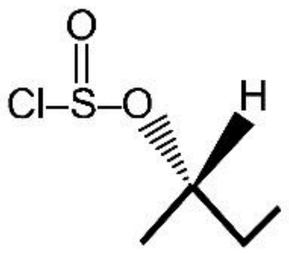
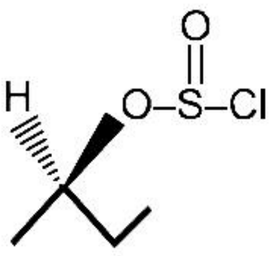
(C) Mixture of R and S 2-Chlorobutane (D) 1-Chlorobutane

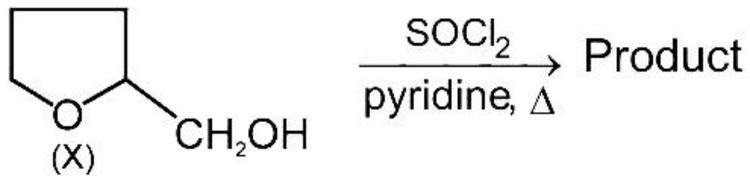
8. 6-Chlorohexan-2-ol $\xrightarrow[\Delta]{NaNH_2}$ major product is

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

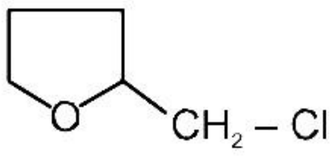
9. The product formed in the reaction ?

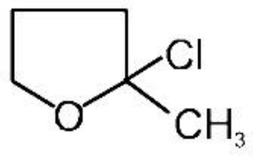
 $\xrightarrow{SOCl_2}$ Product,

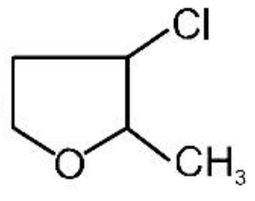
(A)  (B)  (C)  (D) 

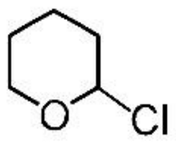
10. 

Product of the above reaction is :

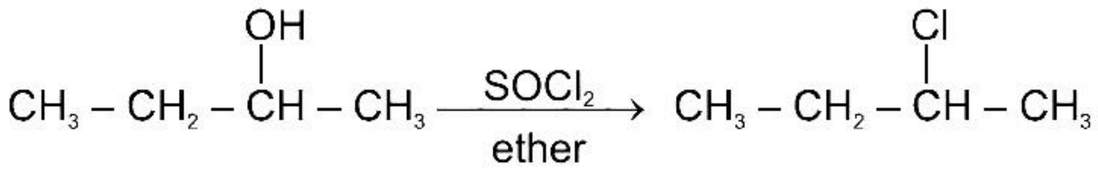
(A) 

(B) 

(C) 

(D) 

11. Consider the following reaction.



In the above reaction which phenomenon will take place :

(A) Inversion (B) Retention (C) Racemisation (D) Isomerisation

12. Butan-2-ol is obtained by using carbonyl compound and Grignard reagent as :

(A) $CH_3–CH=O \xrightarrow[(ii)\ H_2O\ /\ H^{\oplus}]{(i)\ CH_3–CH_2–MgBr}$

(B) $CH_3–(CH_2)_2–CH=O \xrightarrow[(ii)\ H_2O\ /\ H^{\oplus}]{(i)\ CH_3–MgBr}$

(C) $\begin{matrix}H_3C\\H_3C\end{matrix}\!\!>\!C=O \xrightarrow[(ii)\ H_2O\ /\ H^{\oplus}]{(i)\ CH_3–MgBr}$

(D) $CH_2=O \xrightarrow[(ii)\ H_2O\ /\ H^{\oplus}]{(i)\ CH_3–\underset{\displaystyle CH_3}{\underset{|}{CH}}–MgBr}$

13. The product of the reaction $Ph_2C=O \xrightarrow[H_3O^{\oplus}]{LiAlD_4}$ is

(A) $Ph_2CD(OH)$ (B) $Ph_2CH(OD)$ (C) $Ph_2CD(OD)$ (D) None

14. Primary alcohols on first oxidation give

(A) aldehydes (B) ketones (C) both of the above (D) none of the above

15. Secondary alcohols on heating with copper at 300°C give

(A) Alkenes (B) Aldehydes (C) Ketones (D) tert-alcohols

16. Isopropyl alcohol on oxidation forms

(A) acetone (B) propionic acid (C) acetic acid (D) propene

17. In which of the following reaction ketone is formed :

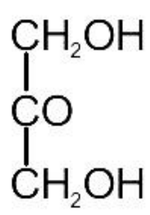
(A) $CH_3–CH_2–OH \xrightarrow{KMnO_4\ /\ \overset{\oplus}{H}}$

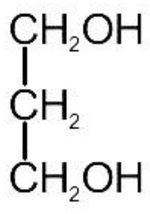
(B) $CH_3–CH_2–OH \xrightarrow{Cu/\Delta}$

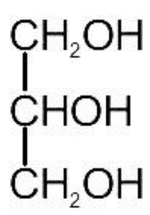
(C) $CH_3–\underset{\displaystyle CH_3}{\underset{|}{CH}}–OH \xrightarrow{Cu/\Delta}$

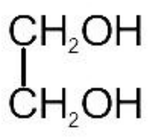
(D) $CH_3–\underset{\displaystyle CH_3}{\overset{\displaystyle CH_3}{\overset{|}{\underset{|}{C}}}}–OH \xrightarrow{Cu/\Delta}$

18. Which of the following compounds is resistant to periodic acid oxidation ?

(A) 

(B) 

(C) 

(D) 

19. Phenol reacts with conc. HNO_3 in the presence of conc. H_2SO_4 to give –

(A) Meta nitrophenol

(B) Ortho nitrophenol

(C) Ortho and para nitrophenol

(D) Picric acid

20. Dehydration of alcohol is an example of :

(A) addition reaction

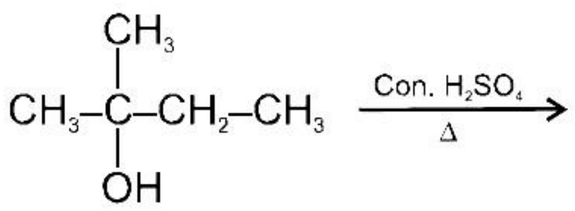
(B) substitution reaction

(C) elimination reaction

(D) rearrangement

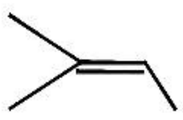
21. Which of the following can work as dehydrating agent for alcohols ?

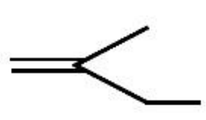
(A) H_2SO_4 (B) Al_2O_3 (C) H_3PO_4 (D) All of these

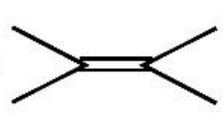
22. 

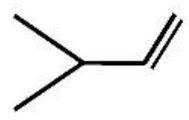
Major Product

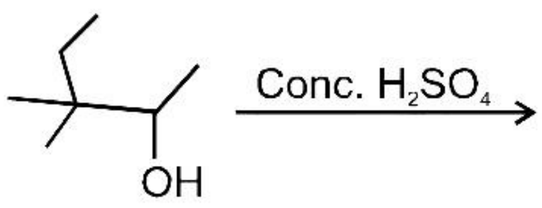
Major product is :

(A) 

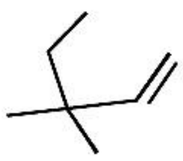
(B) 

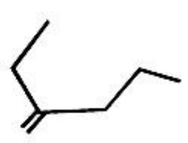
(C) 

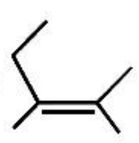
(D) 

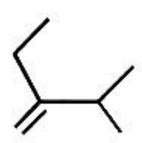
23. 

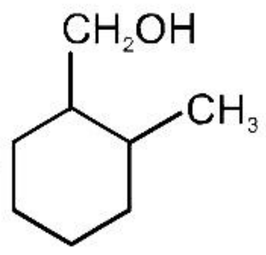
Major product is :

(A) 

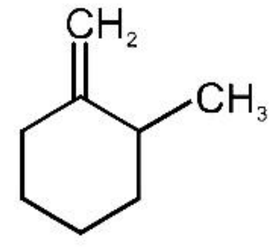
(B) 

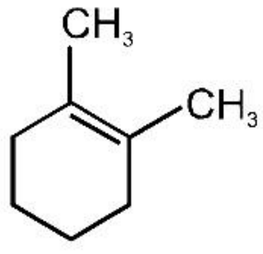
(C) 

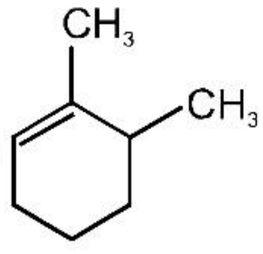
(D) 

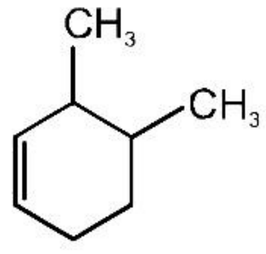
24. In the given reaction :  [X] as major product

[X] will be :

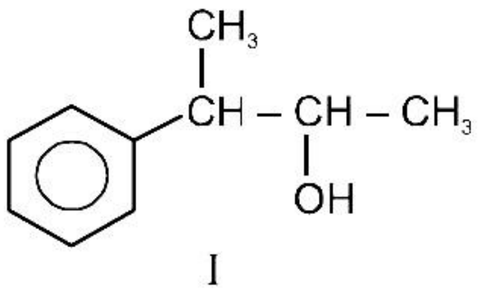
(A) 

(B) 

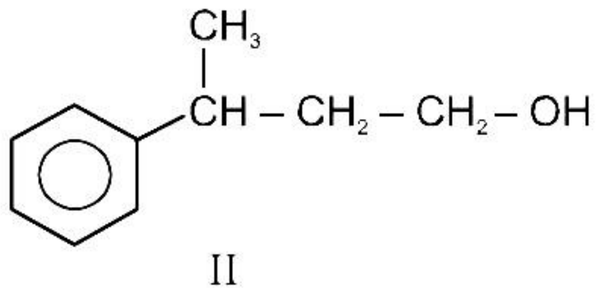
(C) 

(D) 

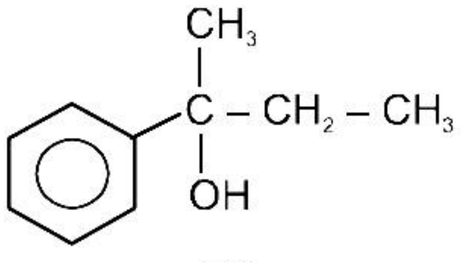
25. The relative rate of acid catalysed dehydration of following alcohols would be :



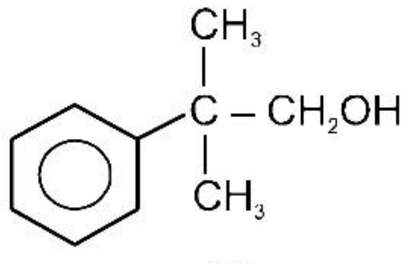
I



II



III



IV

(A) III > I > IV > II (B) III >IV > I > II (C) I > III > IV > II (D) III > IV > I > II

ANASWER KEY

1.	(A)	2.	(B)	3.	(A)	4.	(C)	5.	(A)	6.	(B)	7.	(B)
8.	(D)	9.	(A)	10.	(A)	11.	(B)	12.	(A)	13.	(A)	14.	(A)
15.	(C)	16.	(A)	17.	(C)	18.	(B)	19.	(D)	20.	(C)	21.	(D)
22.	(A)	23.	(C)	24.	(B)	25.	(A)						