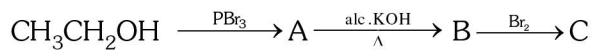


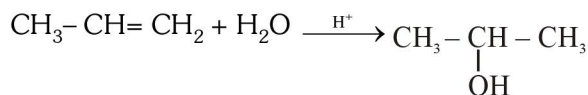
1. The compound A, B and C in the reaction sequence

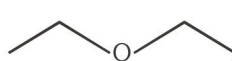
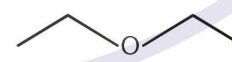
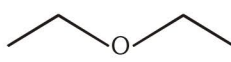
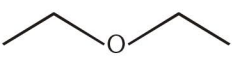


are given by the set

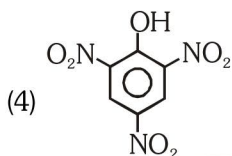
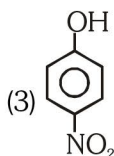
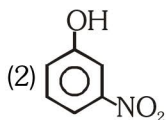
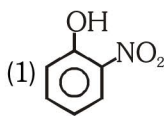
- (1) $\text{C}_2\text{H}_5\text{Br}$, $\text{CH}_3\text{CH}_2\text{OH}$, CH_3CHBr_2 .
 - (2) $\text{C}_2\text{H}_5\text{Br}$, $\text{CH}\equiv\text{CH}$, $\text{CH}_2=\text{CHBr}$
 - (3) $\text{C}_2\text{H}_5\text{Br}$, $\text{CH}_2=\text{CH}_2$, $\text{CH}_2\text{Br}-\text{CH}_2\text{Br}$
 - (4) $\text{C}_2\text{H}_5\text{Br}$, $\text{CH}_3\text{CH}_2\text{OH}$, $\text{BrCH}_2-\text{CH}_2\text{Br}$
2. Which of the following alcohols gives a red colour in Victor Meyer test
- (1) $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{OH}$
 - (2) $\begin{array}{c} \text{CH}_3-\text{CH}-\text{OH} \\ | \\ \text{CH}_3 \end{array}$
 - (3) $(\text{CH}_3)_3\text{C}-\text{OH}$
 - (4) $\begin{array}{c} \text{CH}_3-\text{CH}-\text{CH}_2-\text{CH}_3 \\ | \\ \text{OH} \end{array}$
3. Which of the following does not turn orange colour of chromic acid to green
- (1) 1° alcohol
 - (2) 2° alcohol
 - (3) 3° alcohol
 - (4) Allyl alcohol
4. p, s and t-alcohols can be distinguished by :-
- (1) Reimer-Tiemann reaction
 - (2) Tollen's reagent
 - (3) Lucas test
 - (4) Lassaigne's test
5. Consider the following reaction :
- $$\text{C}_2\text{H}_5\text{OH} + \text{H}_2\text{SO}_4 \rightarrow \text{Product}$$
- Among the following, which one cannot be formed as a product under any conditions ?
- (1) $\text{C}_2\text{H}_5\text{OSO}_3\text{H}$
 - (2) $\text{H}_2\text{C}=\text{CH}_2$
 - (3) $\text{HC}\equiv\text{CH}$
 - (4) $\text{CH}_3-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_3$

6. Select the incorrect option for the following reaction:



- (1) This is an example of NAR of alkene
 - (2) In the first step, protonation of alkene takes place to form carbocation
 - (3) In the second step, *Nucleophilic attack of water* takes place on carbocation
 - (4) In the last step deprotonation takes place to form an alcohol
7. For the reduction of aldehydes and ketones into alcohol the reagent which can be used is/are :
- (1) H_2 in presence of Ni, Pt or Pd
 - (2) NaBH_4
 - (3) LiAlH_4
 - (4) All of these
8. Which of the following does not reduce the carboxylic acids into alcohol ?
- (1) $\begin{array}{l} \xrightarrow[2.\text{H}_3\text{O}^+]{1.\text{LiAlH}_4/\text{ether}} \end{array}$
 - (2) $\begin{array}{l} \xrightarrow[2.\text{H}_3\text{O}^+]{1.\text{B}_2\text{H}_6} \end{array}$
 - (3) NaBH_4
 - (4) $\begin{array}{l} \xrightarrow[\text{H}^+]{\text{ROH}} \xrightarrow[\text{Catalyst}]{\text{H}_2} \end{array}$
9. $\text{CH}_3\text{CH}_2\text{OH} \xrightarrow[\text{413K}]{\text{H}_2\text{SO}_4} \text{B}$ and $\text{CH}_3\text{CH}_2\text{OH} \xrightarrow[\text{443K}]{\text{H}_2\text{SO}_4} \text{A}$ A and B are (respectively)
- (1) , $\text{CH}_2=\text{CH}_2$
 - (2) , 
 - (3) $\text{CH}_2=\text{CH}_2$, $\text{CH}_2=\text{CH}_2$
 - (4) $\text{CH}_2=\text{CH}_2$, 
10. Which of the following is insoluble in water ?
- (1) Ethanol
 - (2) Ethoxyethane
 - (3) Phenol
 - (4) Pentane

11. Nitration of phenol with conc. H_2SO_4 followed by nitric acid gives :-

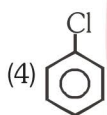
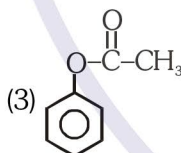
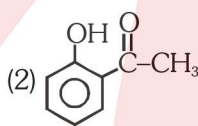
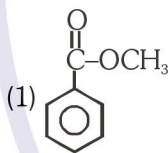
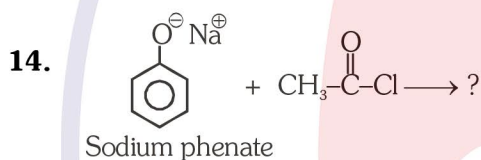


12. Deoxygenation of phenol can be achieved by distillation with :-

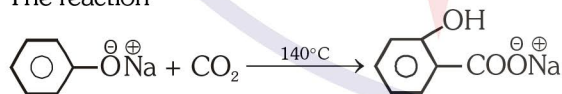
- (1) Raney nickel
(2) Lithium aluminium hydride
(3) Sodium borohydride
(4) Zinc dust

13. Which of the following compounds shows intramolecular hydrogen bonding :-

- (1) p-Nitrophenol (2) Ethanol
(3) o-Nitrophenol (4) Methanamine



15. The reaction



is called :-

- (1) Schotten Bauman reaction
(2) Kolbe Schmidt reaction
(3) Reimer-Tiemann reaction
(4) Lederer-Manasse reaction

16. Phenol can be distinguished from ethanol by reactions with the following except :-

- (1) Iodine and alkali
(2) Ferric chloride
(3) Acetyl chloride
(4) Bromine water

17. Phenol on treatment with methyl chloride in the presence of anhydrous $AlCl_3$ gives chiefly :-

- (1) o-cresol (2) m-cresol
(3) anisole (4) p-cresol

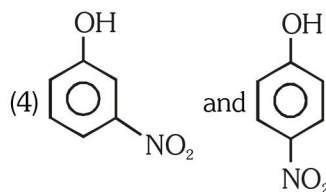
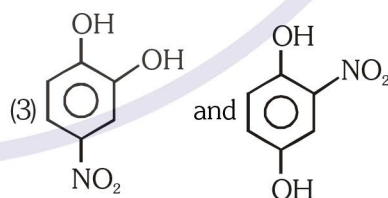
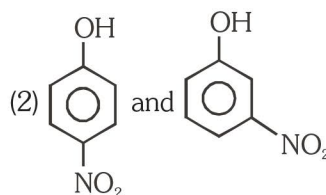
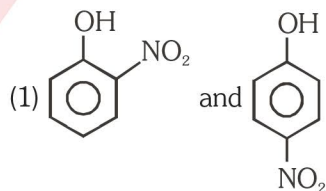
18. Phenol on heating with $NaNO_2$ and a few drops of conc. H_2SO_4 mainly gives :-

- (1) p-nitrophenol (2) p-nitrosophenol
(3) o-nitrophenol (4) m-nitrosophenol

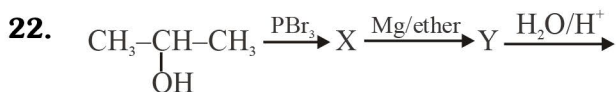
19. Phenol and benzoic acid are distinguished by :-

- (1) Lucas reagent (2) Victor Meyer test
(3) Caustic soda (4) Sodium bicarbonate

20. Phenol on treatment with dil HNO_3 at low temp (298 K) gives two products P and Q. P is steam volatile but Q is not. P and Q are respectively.



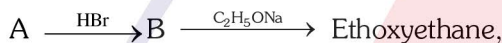
21. The preparation of ethers from alcohols by using sulphuric acid is called :-
 (1) Williamson's ether Synthesis
 (2) Williamson's continuous etherification process
 (3) Ziesel's method
 (4) Zerewitinoff method



The final product is :-

- (1) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{OH}$ (2) $\text{CH}_3-\text{CH}_2-\text{CH}_2-\text{OH}$
 (3) $\text{CH}_3-\underset{\text{CH}_3}{\text{CH}}-\text{O}-\underset{\text{CH}_3}{\text{CH}}-\text{CH}_3$ (4) $\text{CH}_3-\text{CH}_2-\text{CH}_3$

23. In the reaction sequence



A and B are :-

- (1) C_2H_6 , $\text{C}_2\text{H}_5\text{Br}$
 (2) CH_4 , CH_3Br
 (3) $\text{CH}_2=\text{CH}_2$, $\text{C}_2\text{H}_5\text{Br}$
 (4) $\text{CH}\equiv\text{CH}$, $\text{CH}_2=\text{CHBr}$
24.
$$\text{CH}_3-\text{CH}_2-\text{OH} + \text{Ph}-\text{CH}_2-\text{OH} \xrightarrow[140^\circ\text{C}]{\text{H}^+}$$
 of which

is not obtained?

- (1) $\text{CH}_3-\text{CH}_2-\text{OCH}_2-\text{CH}_3$
 (2) $\text{Ph}-\text{CH}_2-\text{OCH}_2-\text{Ph}$
 (3) $\text{Ph}-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_3$
 (4) $\text{Ph}-\text{CH}_2-\text{O}-\text{CH}_2-\text{O}-\text{CH}_3$

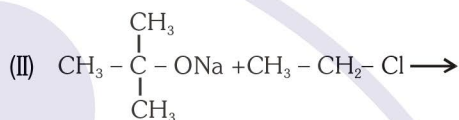
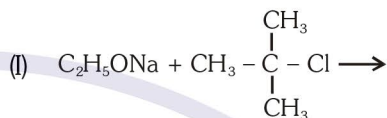
25. Oxonium ion of ether has the structure :-

- (1) $\text{C}_2\text{H}_5-\text{O}-\underset{\text{CH}_3}{\text{CH}}-\overset{\oplus}{\text{O}}-\text{H}$
 (2) $\text{CH}_3-\text{CH}_2-\overset{\oplus}{\text{O}}-\text{CH}_2-\text{CH}_3$
 (3) $(\text{C}_2\text{H}_5)_2\text{O} \rightarrow \text{O}$
 (4) $\text{CH}_3-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\overset{\oplus}{\text{O}}-\text{H}$

26. Which of the following does not react with aq. NaOH :-

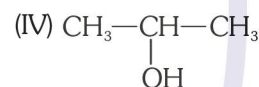
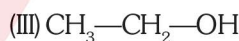
- (1) Phenol
 (2) Benzoic acid
 (3) CH_3COOH
 (4) $\text{CH}_3-\text{O}-\text{C}_6\text{H}_5$

27. A student tried two reactions for preparing tert-butyl ethyl ether :



Which reaction will give better yield of tert butyl ether ?

- (1) Only I (2) Only II
 (3) Both I & II (4) Neither I nor II
28. The correct reactivity order towards H-X will be



- (1) II > I > III > IV (2) IV > III > II > I
 (3) II > IV > I > III (4) II > IV > III > I

29. Which of the following product will be obtained when neopentyl alcohol is treated with conc. HCl in presence of ZnCl_2 .

- (1) t-butyl chloride (2) isobutylene
 (3) t-pentyl chloride (4) Neo pentyl chloride

30. For the reaction,

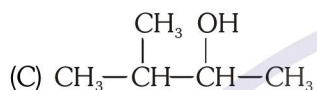
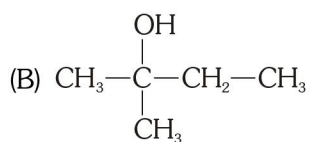
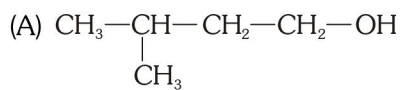


- (1) $\text{HI} > \text{HCl} > \text{HBr}$ (2) $\text{HI} > \text{HBr} > \text{HCl}$
 (3) $\text{HCl} > \text{HBr} > \text{HI}$ (4) $\text{HBr} > \text{HI} > \text{HCl}$

31. Which alcohol produces turbidity with Lucas reagent most slowly

- (1) 2-Butanol (2) t-Butyl alcohol
 (3) Isobutyl alcohol (4) Diphenylcarbinol

32. Arrange the following alkanols A, B and C in order of their reactivity towards acid catalysed dehydration:-



(1) $A > B > C$ (2) $B > A > C$

(3) $B > C > A$ (4) $C > B > A$

ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	3	1	3	3	3	1	4	3	4	4	4	4	3	3	2
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	3	4	2	4	1	2	4	3	4	2	4	2	4	3	2
Que.	31	32													
Ans.	3	3													