

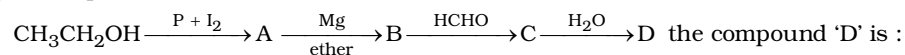
Date Planned : __ / __ / __	Daily Tutorial Sheet-2	Expected Duration : 30 Min
Actual Date of Attempt : __ / __ / __	Level-1	Exact Duration : _____

16. Consider the following reaction, $\text{C}_2\text{H}_5\text{OH} + \text{H}_2\text{SO}_4 \longrightarrow \text{Product}$

Among the following, which one cannot be formed as a product under any conditions ?

- (A) Ethyl hydrogen sulphate (B) Ethylene
(C) Acetylene (D) Diethyl ether

17. In the given sequence of reactions :



- (A) Butanal (B) n-Butyl alcohol
(C) n-Propyl alcohol (D) Propanal

18. The major product of the following reaction $\text{C}_6\text{H}_5\text{CH}_2\text{CH}(\text{OH})\text{CH}(\text{CH}_3)_2 \xrightarrow{\text{conc. H}_2\text{SO}_4}$ is :

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

19. An organic compound 'X' on treatment with pyridinium chloro chromate in dichloromethane gives compound 'Y'. The compound 'Y', reacts with I_2 and alkali to form tri-iodomethane. The compound 'X' is:

- (A) $\text{C}_2\text{H}_5\text{OH}$ (B) CH_3CHO (C) CH_3OH (D) CH_3COOH

20. Which of the following reagents may be used to distinguish between phenol and benzoic acid ?

- (A) Aqueous NaOH (B) Tollen's reagent
(C) Molisch reagent (D) Neutral FeCl_3

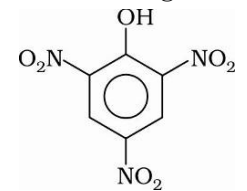
21. An unknown compound 'D' first oxidised to aldehyde and then acetic acid by a dilute solution of $\text{K}_2\text{Cr}_2\text{O}_7$ and H_2SO_4 . The compound 'D' is :

- (A) CH_3OH (B) $\text{C}_2\text{H}_5\text{OH}$
(C) $\text{CH}_3\text{CH}_2\text{COOH}$ (D) $\text{CH}_3\text{CH}_2\text{CHO}$

22. In the reaction, $\text{CH}_3\text{OH} \xrightarrow{\text{Oxidation}} \text{A} \xrightarrow{\text{NH}_3} \text{B}$; A and B are :

- (A) HCHO , HCOONH_4 (B) HCOOH , HCOONH_4
(C) HCOOH , HCONH_2 (D) HCHO , HCONH_2

23. Which of the following will not react with an aqueous solution of NaOH ?

- (A)  (B) $\text{C}_2\text{H}_5\text{OH}$
(C) CH_3CONH_2 (D) $\text{CH}(\text{CN})_3$

24. $2\text{-Propanol} + \text{NaBr} \xrightarrow[\text{Acid}]{\text{Reflux}}$ X. What is X ?
 (A) 2-Bromopropane (B) Propane
 (C) Propene (D) Propanone
25. Which of the following compounds is most acidic ?
 (A) CH_4 (B) C_2H_6 (C) $\text{CH} \equiv \text{CH}$ (D) $\text{C}_2\text{H}_5\text{OH}$
26. Tertiary alcohols having at least four carbon atoms upon drastic oxidation yield carboxylic acid with :
 (A) one carbon atom less (B) two carbon atoms less
 (C) three carbon atoms less (D) All the above three options are correct
27. Consider the following reactions :

$$\text{X} + \text{HCl} \xrightarrow[\text{(addition)}]{\text{Anhydrous AlCl}_3} \text{C}_2\text{H}_5\text{Cl} \xleftarrow[\text{(substitution)}]{\text{anhydrous ZnCl}_2 / \text{HCl}} \text{Y}.$$
 Y can be converted to X on heating with..... at temperature.
 (A) Al_2O_3 , 350°C (B) Al_2O_3 , 200°C
 (C) MCPBA (m-chloroperoxobenzoic acid) (D) NaOH/I_2 , 60°C
28. Two aromatic compounds having formula $\text{C}_7\text{H}_8\text{O}$ which are easily identifiable by FeCl_3 solution test (violet colouration) are :
 (A) *o*-cresol and benzyl alcohol (B) *m*-cresol and *p*-cresol
 (C) *o*-cresol and *p*-cresol (D) methylphenylether and benzyl alcohol
29. Chlorobenzene $\xrightarrow[\text{X}]{\text{Reaction}}$ Phenol $\xrightarrow[\text{Y}]{\text{Reaction}}$ Salicylaldehyde. The reactions X and Y are respectively :
 (A) Fries rearrangement and Kolbe-Schmidt
 (B) Cumene and Reimer-Tiemann
 (C) Dow's process and Reimer-Tiemann
 (D) Dow's process and Friedel-Craft
30. Phenol $\xrightarrow{\text{X}}$ forms a mono-bromo derivative. "X" is :
 (A) bromine in benzene (B) bromine in water
 (C) potassium bromide solution (D) bromine in carbon disulphide at 0°C