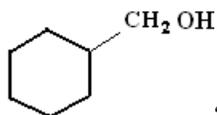
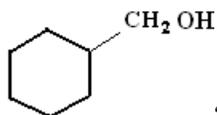
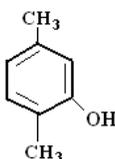


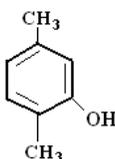
PLOT 5C, 2ND FLOOR, GANAPATI COMPLEX, SEC-13, OPP. JAIPURIA  
SCHOOL, VASUNDHARA, GHAZIABAD (U.P)  
ALCOHOLS, PHENOLS AND ETHERS

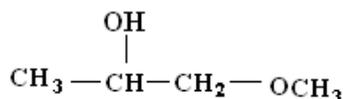
1. Give reason for the following:  
Ortho-nitrophenol is more acidic than ortho-methoxyphenol.
2. How is ethanol obtained from 2-butene?



3. Write IUPAC name of  ?
4. How is t-butyl alcohol obtained from acetone?

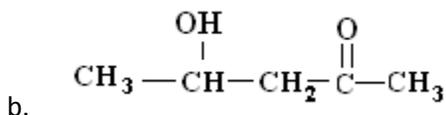
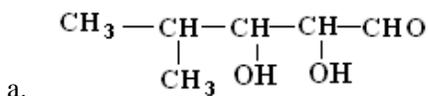


5. Write IUPAC name of  ?
6. How is ethanoic acid industrially obtained from ethanal?
7. How is acetone obtained from 2-bromo-propane?
8. How is phenol obtained from aniline?
9. Account for the following:  
o-nitrophenol has lower boiling point than p-nitrophenol.
10. Give chemical test to distinguish between the following pair of compounds: Phenol and benzoic acid
11. How will you distinguish between 1-propanol and 2-Propanol by suitable chemical test?
12. Of the two hydroxy organic compounds ROH and R'OH, the first one is basic and the other is acidic in behaviour. How is R different from R'?
13. Mention an industrial product manufactured from methanal.
14. Give the structural formula and name of the product of the following reaction: Phenol is treated with an excess of aqueous bromine.
15. Write one example of each : a. a nucleophile b. an electrophile
16. In the absence of kerosene oil can we store sodium metal diethyl or ethyl alcohol or anhydrous hexanol?
17. How is CO converted into methanol?
18. Write the IUPAC name of the following compound:

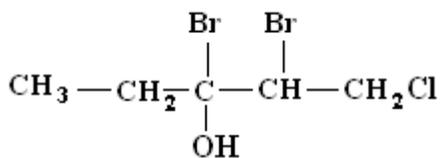


19. Write the IUPAC name of the following compound:  
(CH<sub>3</sub>)<sub>3</sub>COH

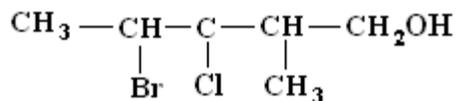
20. Write the IUPAC name of the following compound:



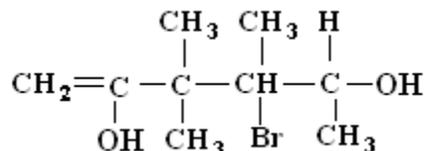
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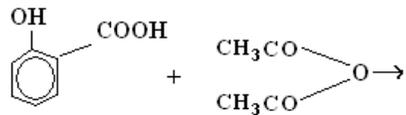
c.



d.



e.

21. How many sigma bonds are present in 3-methyl phenol?
22. How would you account for the following:
- Phenols are much more acidic than alcohols.
  - The boiling points of ethers are much lower than those of the alcohols of comparable molar masses.
23. How may the following conversions be carried out:
- Propene to propan-2-ol
  - Anisole to phenol
  - Benzyl chloride to benzyl alcohol
  - Ethyl magnesium bromide to propan-1-ol.
  - Phenol to Salicylic acid.
  - 1-propanal to 1-chloro-2-propanol.
24. Give an illustration of Reimer-Tiemann reaction.
25. Explain how an OH group attached to a carbon in the benzene ring activates benzene towards electrophilic substitution.
26. What happens when ethanol is heated with concentrated sulphuric acid at 453K? explain the mechanism of this reaction.
27. Complete the reaction:
- $(\text{CH}_3)_2\text{CO} \xrightarrow{\text{LiAlH}_4}$
  -
- 
28. a) Give a chemical reaction to distinguish between phenol and ethanol in seemingly similar conditions.  
 b) Write the reaction equation for what happens tertiary butyl alcohol is heated with reduced copper at about 573K.
29. Explain giving reasons why
- Phenol has a smaller dipole moment than methanol.
  - It undergoes electrophilic substitution reactions.
30. Phenol is a weak acid. What substitution in the molecule can make it a stronger acid and a weak acid and why?
31. Why is it that phenol is acidic and hexanol is neutral towards a solution of NaOH?
32. How will you distinguish between 1-propanal and 2-propanal?