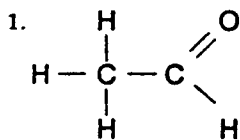


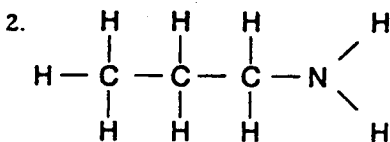
Organic Chemistry

A. Classifying Organic Compounds

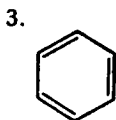
Organic substances can be classified into a number of different groups, depending on their structures. Classify each of the following substances as either an *alkane*, *alkene*, *alkyne*, *cycloalkane*, *aromatic*, *alcohol*, *aldehyde*, *ketone*, *ether*, *organic acid*, *ester*, *amine*, or *amide*.



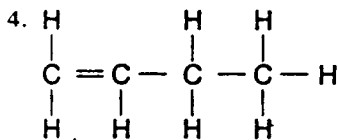
aldehyde



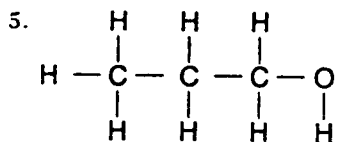
amine



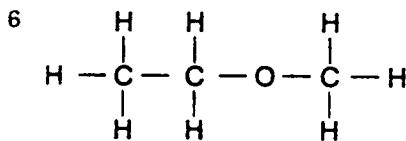
aromatic



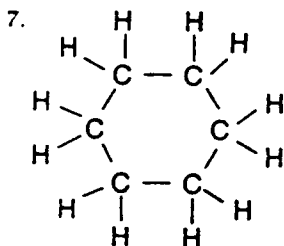
alkene



alcohol



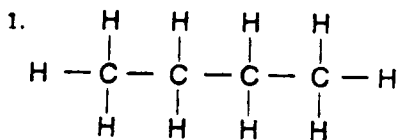
ether



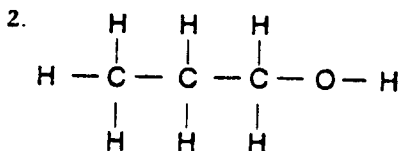
cycloalkane

B. Naming Organic Compounds

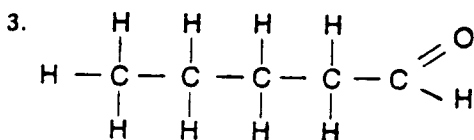
In naming organic substances, a set of rules formulated by IUPAC is usually followed. Use the IUPAC rules to name each of the following.



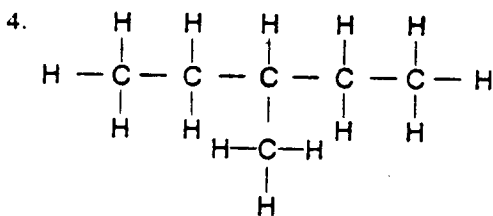
butane



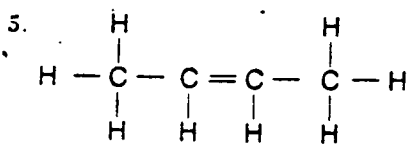
1-propanol



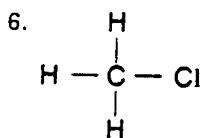
pentanal
butanal



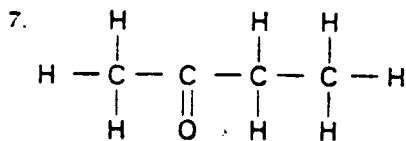
3-methylpentane



cis-2-butene

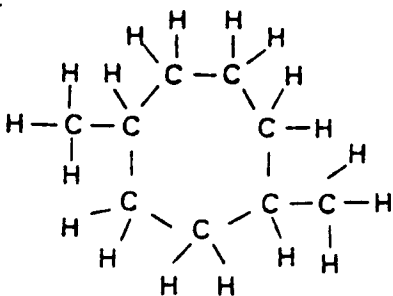


chloromethane



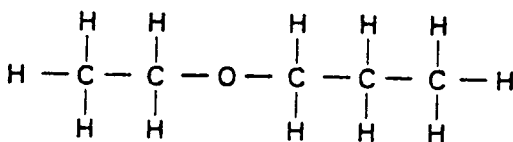
butanone

8.



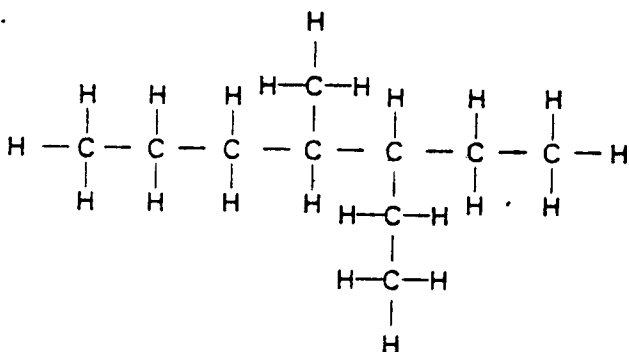
1,4-dimethylcycloheptane

9.



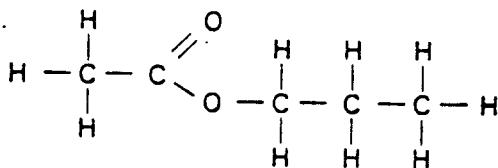
ethoxypropane

10.



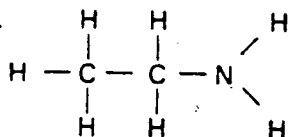
3-ethyl-4-methylheptane

11.



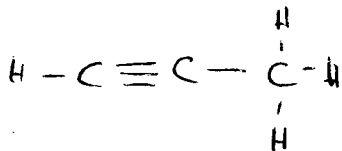
propyl ethanoate

12.

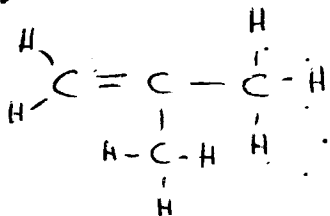


ethylamine

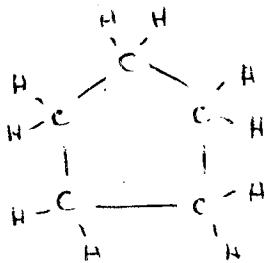
9. propyne



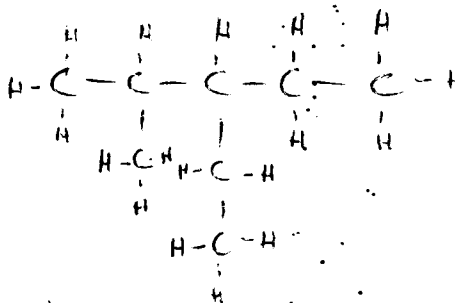
10. 2-methylpropene



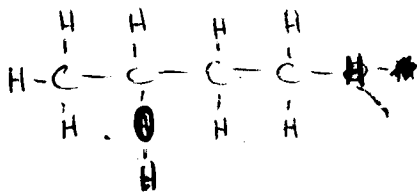
11. cyclopentane



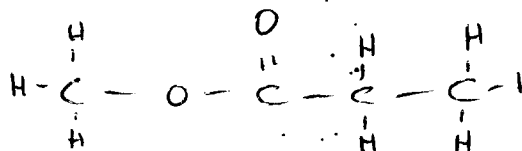
12. 3-ethyl-2-methylpentane



13. 2-butanol



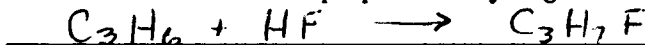
14. methyl propanoate



D. Writing Equations for Organic Reactions

Organic compounds can undergo many kinds of reactions. Write balanced equations for each of the reactions below.

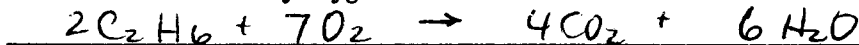
1. Addition reaction between propene and hydrogen fluoride



2. Substitution reaction between methane and bromine



3. Combustion of ethane by oxygen



4. Esterification reaction between methanoic acid and methanol



5. Formation of an amide by methanoic acid and methylamine

