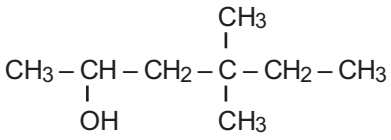
Section 26.12 Answers to Questions and Problems

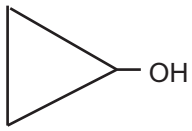
Questions:

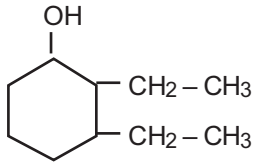
{1} Only one position is possible for the –OH group; {2} Whatever position the –OH group occupies is automatically #1 if the compound is named as an alcohol; {3} Such a compound would be an aldehyde, not a ketone

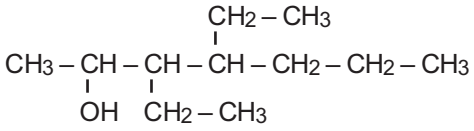
Problems:

1. a. 3-pentanol; b. 2-butanol; c. 3-methyl-2-butanol; d. 4,5-dimethyl-2-hexanol; e. 4-ethyl-1-hexanol; f. cyclobutanol; g. 2-methylcyclohexanol; h. 3,4-dimethylcyclopentanol; i. 2-ethyl-3-methylcyclopropanol; j. 2-propanol

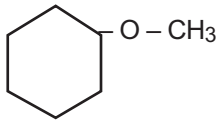
2. a. 

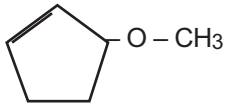
b. 

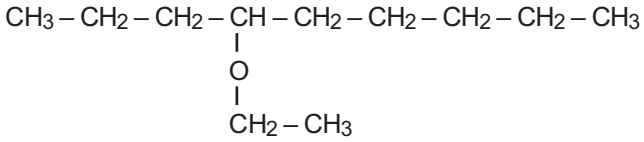
c. 

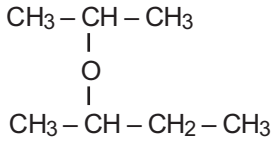
d. 

3. a. 1-methoxybutane; b. 1-propoxypropane; c. 2-ethoxypentane

d. 

e. 

f. 

g. 

4. a. 2-butanone; b. 3-methylbutanal; c. 2,3-dimethylpentanal; d. 5,6-dimethyl-3-heptanone; e. 7-methyl-4-octanone

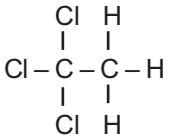
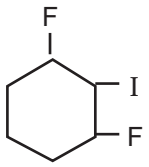
5. a. 4-ethylhexanoic acid; b. hexanoic acid; c. 3-ethylhexanoic acid; d. 4,7-dimethyloctanoic acid; e. 3-methylbutanoic acid; f. 4-n-butyl-4-methyloctanoic acid (The "-n-" is optional.)

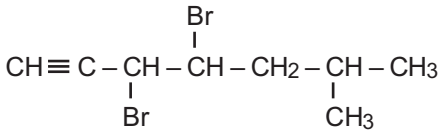
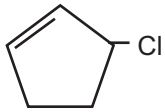
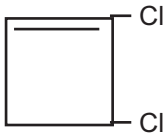
6. a. n-propyl butanoate (the n is optional here and in parts c, e, and f); b. methyl pentanoate c. n-butyl propanoate; d. isopropyl ethanoate; e. n-propyl pentanoate; f. n-pentyl methanoate

7. a. ethyldimethylamine; b. ethylmethylamine; c. 2-amino-4-methylheptane; d. methylpentylamine; e. triethylamine; f. 1-amino-6-methyloctane; g. isopropylamine (or 2-aminopropane); h. cyclobutylamine (or aminocylcobutane)

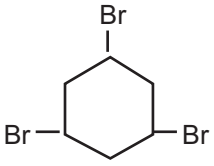
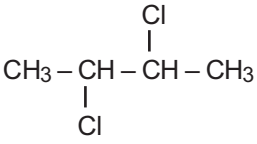
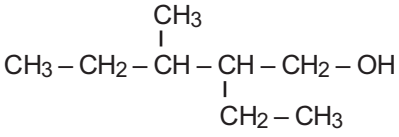
8. a. methanamide; b. pentanamide; c. 4-ethylhexanamide; d. 3,3-dimethylbutanamide e. 5-ethyl-3-methylheptanamide; f. 3,3,5-trimethylhexanamide

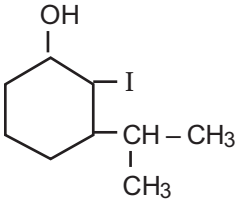
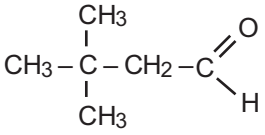
9. a. 2,3-dichloropentane; b. difluoromethane; c. 4-bromo-2-fluoro-3-iodohexane; d. 3-bromo-1-butene; e. 1-bromoheptane; f. dichlorodifluoromethane

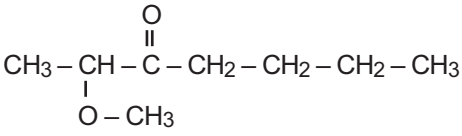
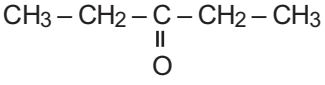
10. a.  b.  c.  d. 

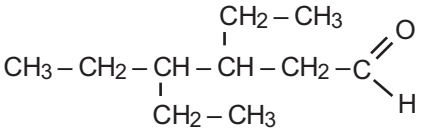
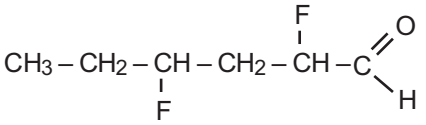
e.  f.  g. 

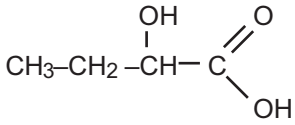
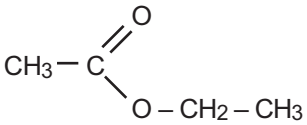
11. a. OK; b. 2-methyl-2-butanol; c. 4-bromo-2,2,3-trimethylheptane; d. 3-methyl-3-hexanol; e. 2-chloro-3,3-dimethyl-2-butanol; f. 1-butanol

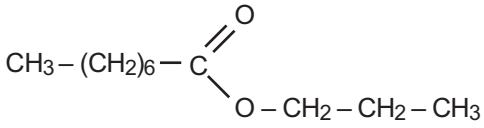
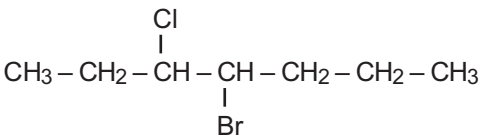
12. a.  b.  c. 

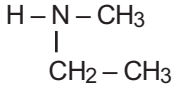
d. e.  f. 

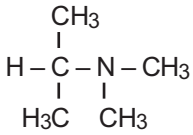
g.  h. 

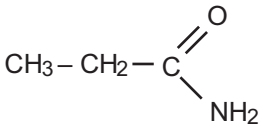
i.  j. 

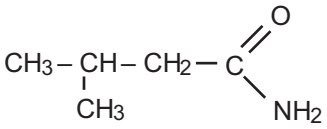
12. k.  l. 

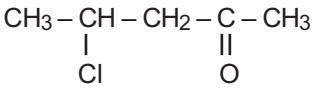
m.  n. 

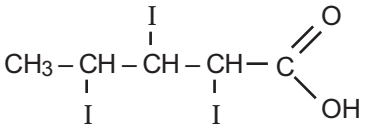
12. o. 

p. 

q. 

r. 

s. 

t. 

13. a. aminoethane; b. 2-aminopropane