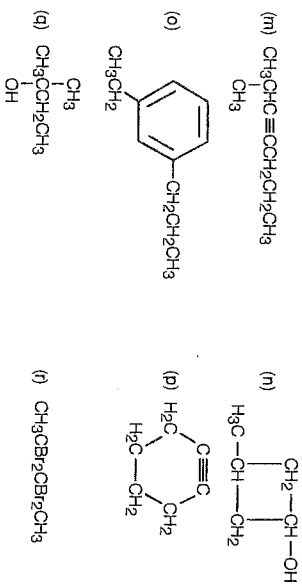


38. (a) 2-fluoropentane  
 (b) 3-chloro-3-hexene  
 (c) 1,4-diodo-2-butyne  
 (d) pernyl methanoate  
 (e) 3-bromo-3,5,5-trimethyloctane  
 (f) 1,3-dichlorocyclobutane  
 (g) 1-fluoro-4-propylbenzene  
 or 4-fluoro-1-propylbenzene  
 (h) 2,6-dimethyloctane  
 (i) 4-bromo-5-chloro-1-iodo-2-pentene  
 OH
- (j) 4-iodo-2-butanol  
 (k) 3-methyl-1-cyclopentanol  
 (l) 1,3,5-triethylbenzene  
 (m) 3-bromo-1-propene  
 (n) pernyl ethanoate  
 (o) 2,4-dibromo-1-methylbenzene  
 (p) 1,2,3-trimethylcyclopropane  
 (q) cyclopropanol  
 (r) 1-chloro-2-ethylbenzene  
 or 2-chloro-1-ethylbenzene
- (a)  $\text{F-CH}_2\text{-CH(OH)-CF}_2\text{-CH}_3$   
 OH
- (b)  $\text{CH}_3\text{C}\equiv\text{OCHClCH}_2\text{CH}_3$
- (c)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{COOCH}_2\text{CH}_3$
- (d)  $\text{CH}_3\text{CH}_2\text{CH(OH)CH(OH)CH}_2\text{CH}_2\text{CH}_3$   
 $\text{CH}_3$   $\text{CH}_3$
- (e)  $\text{CH}_3\text{CH}_2\text{C}\equiv\text{OCH}_2\text{CH}_2\text{CH}_2\text{CH}_3$
- (f)
- (g)  $\text{Br-CH}_2\text{CH}_2\text{C}\equiv\text{CHCH}_2\text{CH}_3$   
 Br
- (h)  $\text{CH}_3\text{CH}_2\text{C}\equiv\text{OCH}_3$
- (i)  $\text{CH}_3\text{CH}_2\text{C}\equiv\text{OCH}_2\text{CH}_2\text{CH}_2\text{COOCH}_3$
- (j)
- (k)  $\text{CH}_2=\text{C}(\text{I})-\text{C}(\text{I})(\text{H}_3\text{C})-\text{CH}_2\text{CH}_2\text{CH}_3$
- (l)



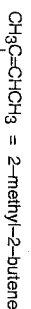
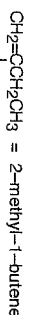
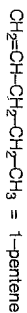
40.  $\text{C}_n\text{H}_{2n+2}$  implies no loss of H's (no multiple bonds; no ring present which joins one end of a chain back onto itself).

$\text{C}_n\text{H}_{2n}$  implies the loss of 2 H's due to either a ring present **OR** a double bond.

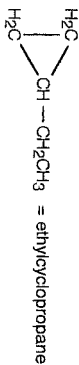
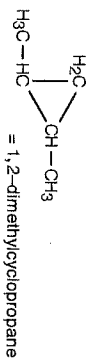
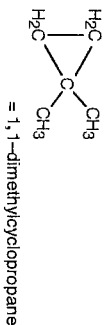
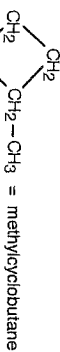
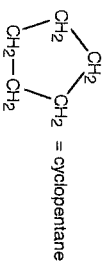
$\text{C}_n\text{H}_{2n-2}$  implies the loss of 4 H's due to either a triple bond **OR** two double bonds **OR** two rings present **OR** a double bond AND a ring present.

Answers: c, e, g, i

41. Structures involving a double bond:



Structures involving a ring:



42. (a) carboxylic acids, amino acids  
 (b) amines  
 (c) esters
- (d) alkanes  
 (e) amino acids  
 (f) esters

