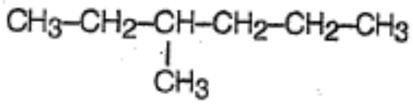
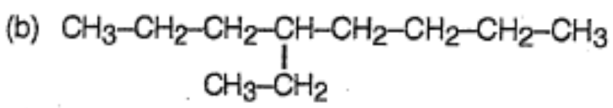
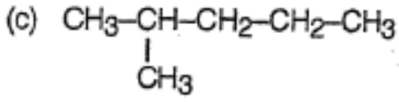
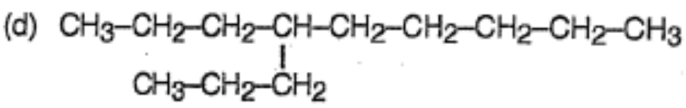
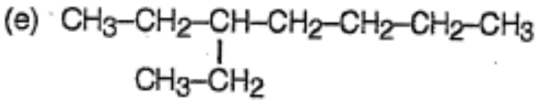
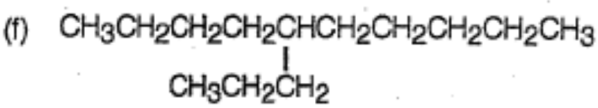
Name:_____ Block:_____ Date:_____

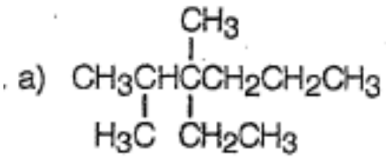
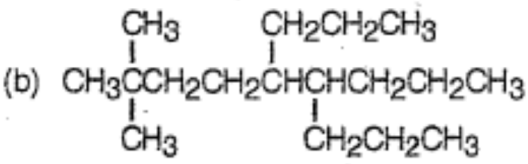
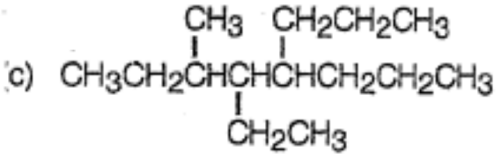
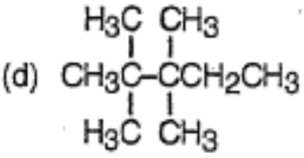
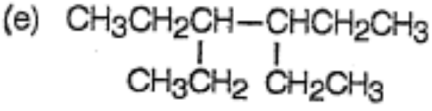
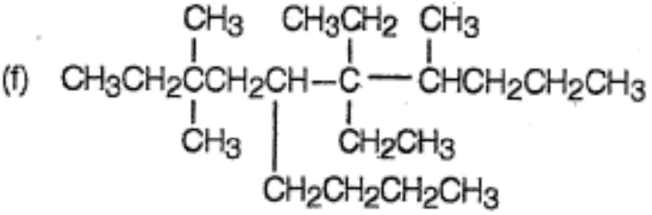
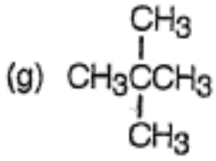
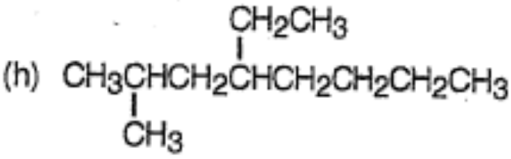
Chemistry 11 **Naming Alkanes Key** Assignment

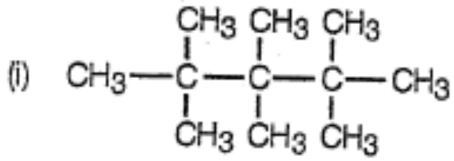
1. a. 7 carbons, heptane b. 7 carbons, heptane c. 8 carbons, octane d. 8 carbons, octane

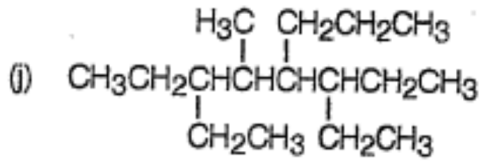
2. a. 3-methylhexane b. 4-ethylheptane c. 3-ethyloctane d. 2-methylhexane
   e. 4-methylnonane f. 3-methylheptane

3. (a) 
   (b) 
   (c) 
   (d) 
   (e) 
   (f) 

4. a. the longest chain is actually heptane and it was numbered backwards
   b. the longest chain is actually hexane
   c. the second carbon from the left should only have 2 hydrogens attached
   d. the central carbon is making 5 bonds, so should not have a hydrogen attached

5. a) 
   (b) 
   c) 
   (d) 
   (e) 
   (f) 
   (g) 
   (h) 

(i) 

(j) 

6. a. 3,4-dimethylheptane b. 3,4,4,5-tetraethylheptane c. 2,2,7,7-tetramethyloctane
   d. 3-ethyl-4,5-dimethylheptane e. 4-ethyl-4-methyloctane f. 2,2,5-trimethyloctane
   g. 4,6-dimethylnonane h. decane i. 4,5-diethyl-3,7-dimethylnonane
   j. 3,3,4,5-tetramethyloctane k. 4-ethyl-3-methyl-5-propyloctane
   l. 3,6-diethyl-5,8-dimethyldecane