Name:

Date: CALVIN

Hour:

40

Chemistry Ch.22 Quiz

1) Write the formula for Pentane: C_5H_{12}

2) List the prefixes used in naming Hydrocarbons:

1 ~ meth	2 ~ eth	3 ~ prop	4 ~ but
5 ~ pent	6 ~ hex	7 ~ hept	8 ~ oct
9 ~ non	10 ~ dec		

3) Prefix for a ring is: cyclo-

4) Ending for an attachment is: -yl

5) Draw ALL possible isomers containing FIVE carbon atoms. Box in the parent chain and NAME each of them.

$CH_3-CH_2-CH_2-CH_2-CH_3$

Pentane

$CH_3-CH_2-CH-CH_3$ (with CH_3 branch)

1-methyl-butane

$CH_3-C(CH_3)_2-CH_3$

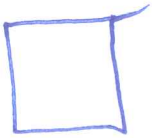
2,2-dimethyl-propane

6) Endings for:

a) Single bonds -ane b) Double bonds -ene c) Triple bonds -yne

7) Draw the following:

a) 1-propyl-cyclobutane b) 1- ethene c) pentane



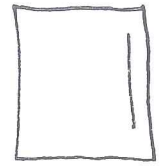
$CH_2-CH_2-CH_3$

$CH_2=CH_2$

CH_3-CH_2 (with $CH_2-CH_2-CH_3$ branch)

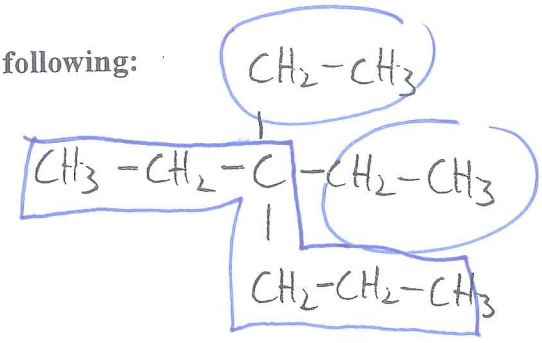
8) Name the following:

a)



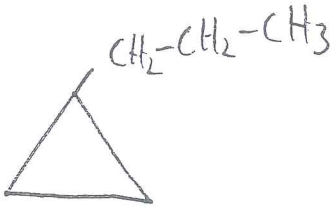
1-cyclobutene

b)



3,3-diethyl-hexane

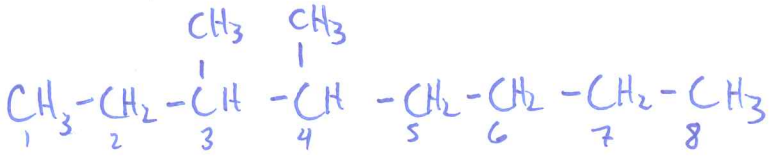
c)



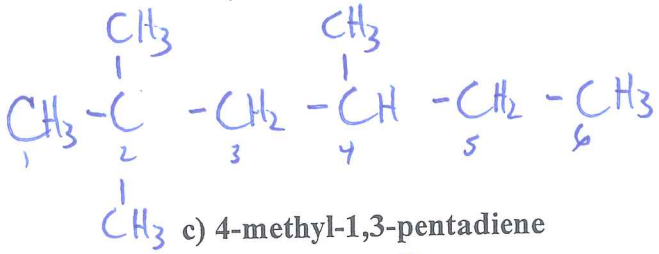
1-propyl-cyclopropane

9) Draw the following:

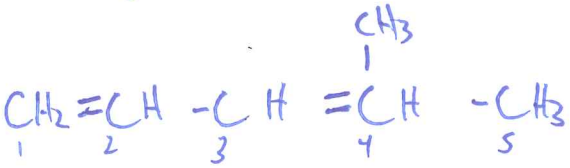
a) 3,4-dimethyl octane



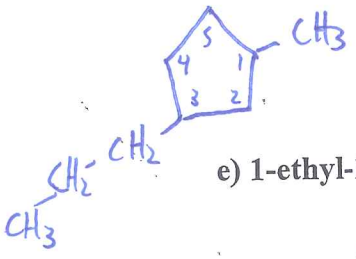
b) 2,2,4-trimethyl hexane



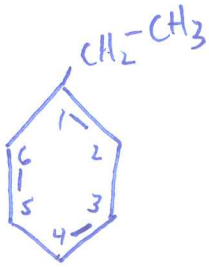
c) 4-methyl-1,3-pentadiene



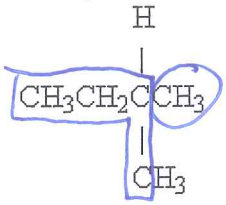
d) 1-methyl-3-propyl-cyclopentane



e) 1-ethyl-1,3,5-cyclohexatriene

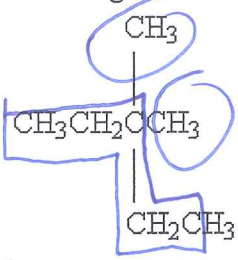


10) Name the following:



A) isopropane
B) methylpentane
C) methylbutane
D) *n*-pentane
E) dodecane

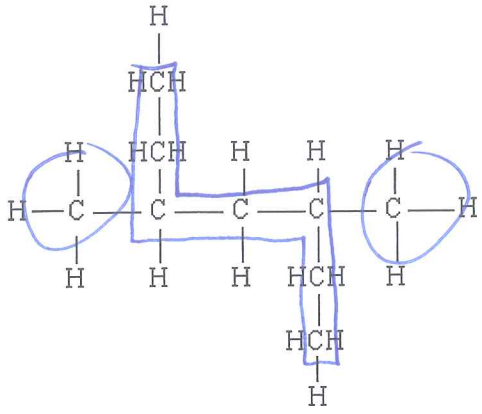
11) Name the following:



A) *n*-heptane
B) 2-methyl-2-ethylbutane
C) 3,3-dimethylpentane
D) 2,2-diethylpropane
E) none of these

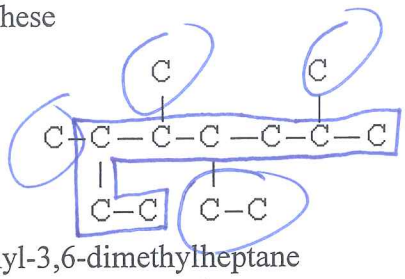
12) Name the following: $CH_3-CH_2-CH_3$

A) ethane
B) propane
C) butane
D) pentane
E) Hexane



13)

A) 2,4-diethylpentane
B) 3,5-dimethylheptane
C) secondary ethylpentane
D) 2,3-dimethyl-2,3-diethylpropane
E) none of these

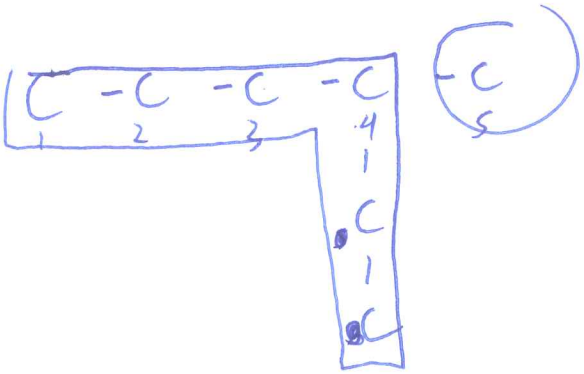


14)

A) 2,4-diethyl-3,6-dimethylheptane
B) 2,5-dimethyl-4,6-diethylheptane
C) 1,4-diethyl-3,6-dimethyl-tridecane
D) 5-ethyl-3,6-trimethyloctane
E) 4-ethyl-2,5,6-trimethyloctane

15) In lecture, the professor named a molecule 4-ethylpentane. An alert student pointed out that although the correct structure could be drawn, the name did not follow systematic rules. What is the correct systematic name for the molecule?

A) 2-ethylpentane
B) 1-methyl-1-propylpropane
C) 3-methylhexane
D) 4-methylhexane
E) none of these



16) Which of the following pairs is incorrect?

A) ethane – C_2H_4
B) pentane – C_5H_{12}
C) hexane – C_6H_{14}
D) heptane – C_7H_{16}
E) octane – C_8H_{18}