

Quiz #1 Ch 1-3 Fall 99 (20 questions for 20 points)

NAME: _____

(1-10) are True or False.

- 1) Organic chemistry is the study of carbon containing compounds
- 2) Like charges attract each other
- 3) Polar compounds are formed between atoms of similar electronegativities
- 4) Nitrogen is more electronegative than carbon
- 5) $\text{CF}_2=\text{CFH}$ can exist as cis and trans isomers
- 6) $\text{CHF}=\text{CClBr}$ can exist as cis and trans isomers
- 7) The $n=2$ shell can hold 18 electrons
- 8) sp^3 hybrid orbitals give rise to bond angles of 109.5°
- 9) sp^2 hybrid orbitals give rise to bond angles of 180°
- 10) A p orbital is spherical in shape

11-17) Draw Lewis structures (lines for bonds, dots for lone pairs of electrons) for:

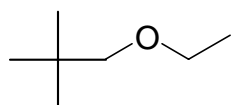


13) OH_2

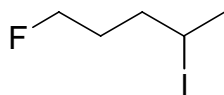
14) HCl

15) $\text{CH}_3\text{CH}_2\text{CO}_2\text{H}$

16)



17)



18) Does cyclobutane have more ring strain than cyclopropane? (y/n)

19) Draw the chair and boat conformations of cyclohexane (1/2 for each)

20) Which is the more stable?

BONUS QUESTION for 1 extra point

Name the famous chemist who invented the Pauling Electronegativity scale.

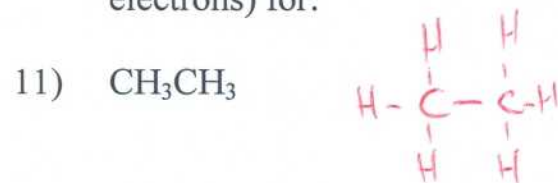
Quiz #1 Ch 1-3 Fall 99 (20 questions for 20 points)

NAME: Restaurant Quality Answers

(1-10) are True or False.

- 1) **T** Organic chemistry is the study of carbon containing compounds
- 2) **F** Like charges attract each other
- 3) **F** Polar compounds are formed between atoms of similar electronegativities
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- 9) **F** sp^2 hybrid orbitals give rise to bond angles of 180°
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11-17) Draw Lewis structures (lines for bonds, dots for lone pairs of electrons) for:



11-17

$-\frac{1}{2}$ per Error

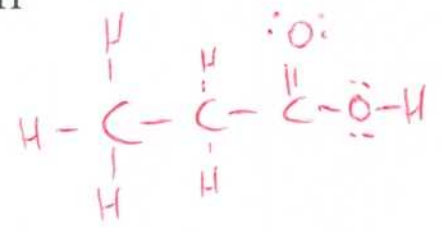
13) OH_2



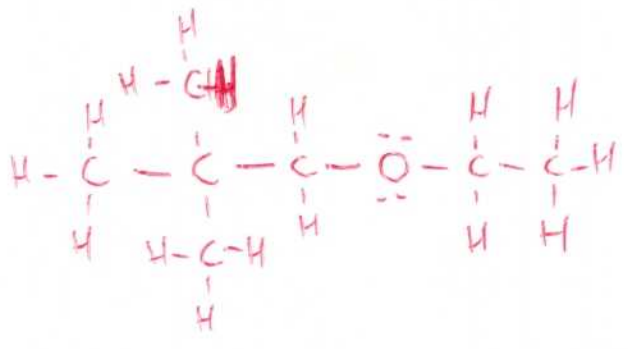
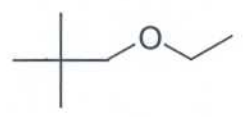
14) HCl



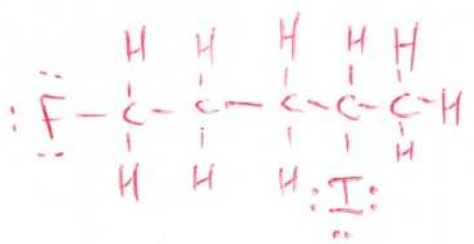
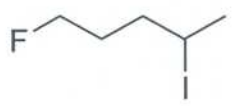
15) $\text{CH}_3\text{CH}_2\text{CO}_2\text{H}$



16)



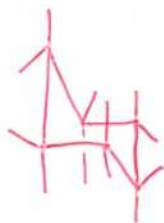
17)



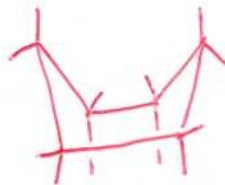
18) Does cyclobutane have more ring strain than cyclopropane? (y/n)

NO

19) Draw the chair and boat conformations of cyclohexane (1/2 for each)

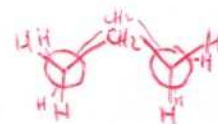
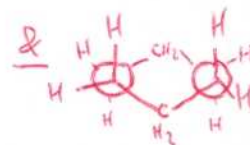


CHAIR



BOAT

also 



20) Which is the more stable?

CHAIR

BONUS QUESTION for 1 extra point

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(LINUS) PAULING

3 MINUTES.