**CHE-2060 Lecture 2 Quiz**

This take-home quiz is due in at the end of the day on Monday. You are welcome to attach any additional pages needed.  
***Please email if you have any questions.***

**2.1: Drawing molecular structures**

1. Draw the complete structure (showing all atoms) of CH3CH2CH(CH3)CH2CH(OH)CH3.
2. Create line-bond drawings to represent these molecules:
   1. (CH3)3C(CH2)3CH(CH3)2
   2. (CH3)3CBr
   3. CH3NH(CH2)2CH3

**2.2: Arrow formalism & molecular framework**

1. Draw the results of the changes indicated by the arrows below.

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NH2

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1. Add the appropriate arrows to explain the movement of electrons that results in this reaction.

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**2.3 & 2.5: Introduction to alkanes & IUPAC naming**

1. Write line-bond drawings for these alkanes.
   1. propylcyclopentane
   2. 2,6-dimethyl-4-(2-methylpropyl)decane
   3. 2,3,3,4-tetramethylheptane

**2.4 & 2.7: Isomers & functional groups**

1. Write line-bond drawings for two isomers each of the following molecules that contain functional groups.
   1. Six-carbon aldehyde
   2. Seven-carbon ketone
   3. Four-carbon ether
   4. Eight-carbon ester

**2.8: Alkenes**

1. Write line-bond drawings for these alkenes.
   1. 5-ethyl-1-methylcyclohexene
   2. *cis*-1,2-dichlorohexene
   3. *(Z)*-1,3,4-tribromo-2-pentene
   4. *(E)*-1,2-dibromo-3-isopropyl-2-hexene

**2.9: Alkynes**

1. Write line-bond drawings for these alkynes.
   1. 2-octyne

b. 4-methyl-2-pentyne

**2.10: Alkene isomers**

1. Using wedges to show atoms that come out of the paper towards you and dashed wedges to show atoms that recede behind the paper, write line-bond drawings that represent these cycloalkanes.
   1. *Cis-*1-ethyl-3-methylcyclohexane
   2. *Trans*-1-ethyl-2-isopropylcyclobutane
   3. *Cis*-1-ethyl-3-methylcyclopropane

**2.11: Arenes**

1. Draw these arenes:

a. 1-ethyl-3-methyl-5-propylbenzene

b. 3-pheynyltoluene

c. 4-(1,1-dimethylethyl)-phenol

**2.12: Organohalogens**

1. A hydrocarbon is named 2-flouro-3-chloro-4-pentene.
   1. Draw this molecule.
   2. Correct it’s name.