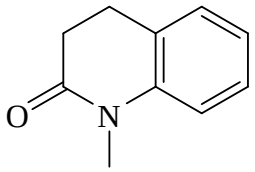
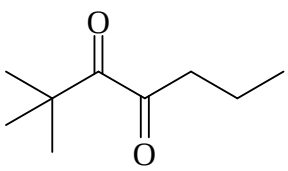
Chem1611 **Sample Quiz 2 (i)** **Last update: 27/4/17**

1. What is the molecular formula of the following compound?

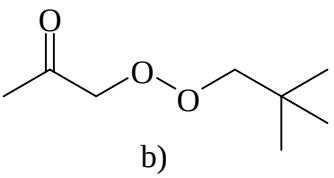
a) C_9H_9NO
b) $C_9H_{10}NO$
c) $C_{10}H_{10}NO$
d) $C_{10}H_{11}NO$
e) $C_{10}H_{12}NO$



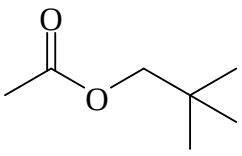
2. Which of the following is the correct stick representation of $CH_3COCH_2OOCH_2C(CH_3)_3$?



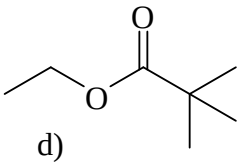
a)



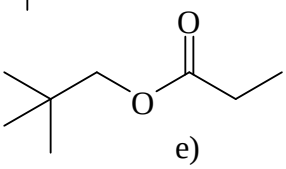
b)



c)

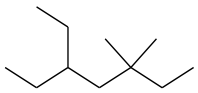


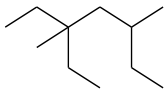
d)



e)

3. Which of the following stick representations is 5-ethyl-3,3-dimethylheptane?


a)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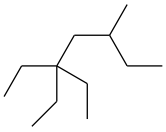
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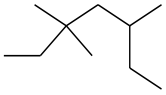
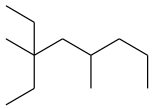
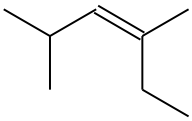

d)

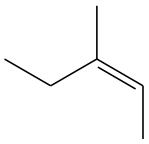

e)

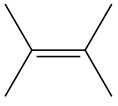
4. What is the correct name for the following compound?

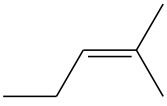
a) (*E*)-3,5-dimethyl-3-hexene
b) (*Z*)-3,5-dimethyl-3-hexene
c) (*Z*)-2,4-dimethyl-3-hexene
d) (*E*)-2-ethyl-4-methyl-2-pentene
e) (*Z*)-2-ethyl-4-methyl-2-pentene

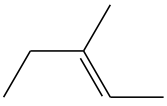


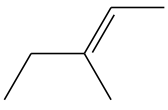
5. What is the correct stick representation of (*Z*)-3-methyl-2-pentene?


A

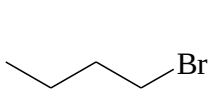

B


C

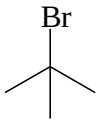

D


E

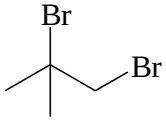
6. What is the major product from the addition of HBr to 1-butene?



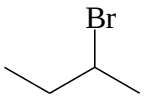
a)



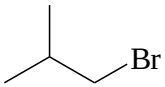
b)



c)



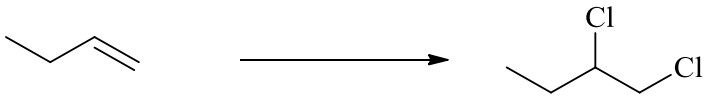
d)



e)

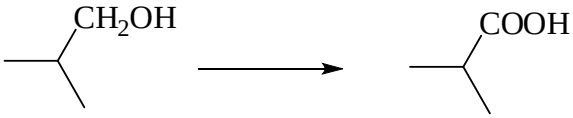
7. Which term which best describes the overall mechanism of the following reaction?

a) Oxidation
b) Reduction
c) Electrophilic Addition
d) Nucleophilic Substitution
e) Nucleophilic Addition



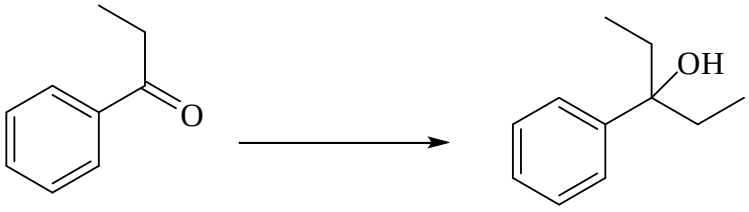
8. Which one of the following reagents would best effect the conversion shown?

a) H_2 / Pd catalyst
b) $NaBH_4$ followed by H^+/H_2O
c) $Cr_2O_7^{2-}/H^+$
d) hot conc. H_2SO_4
e) hot dilute OH^-



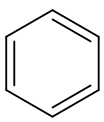
9. Which one of the following reagents would best effect the conversion shown?

a) H_2 / Pd catalyst
b) CH_3CH_2MgBr followed by H^+/H_2O
c) $CH_3CH_2CH_2CH_2I$ followed by H^+/H_2O
d) CH_3CH_2I followed by H^+/H_2O
e) $NaBH_4$ followed by H^+/H_2O

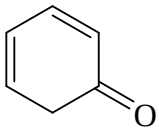


10. Which of the following compounds are aromatic?

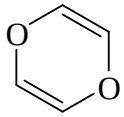
a) W, X, Y
b) W, Y, Z
c) V, X
d) V, Z
e) V, X, Z



V

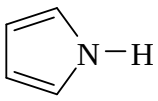


W



X

Y



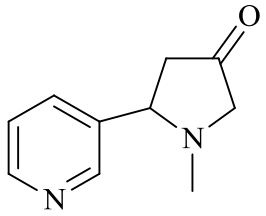
Z

Correct answers: 1D, 2B, 3A, 4C, 5A, 6D, 7C, 8C, 9B, 10D

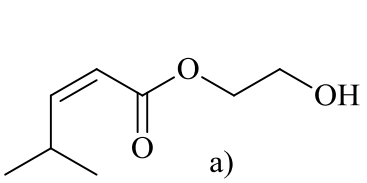
Chem1611 **Sample Quiz 2 (ii)** **Last update: 27/4/17**

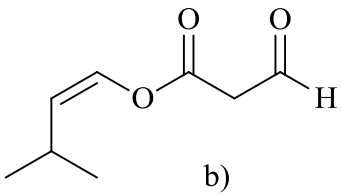
1. What is the molecular formula of the following compound?

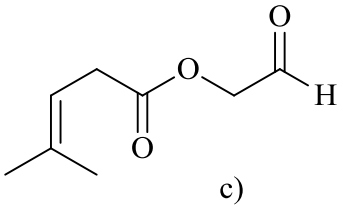
a) $C_9H_9N_2O$
b) $C_9H_{10}N_2O$
c) $C_{10}H_{10}N_2O$
d) $C_{10}H_{11}N_2O$
e) $C_{10}H_{12}N_2O$

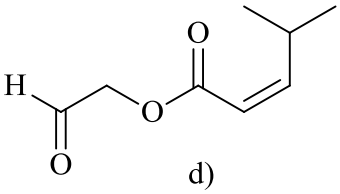


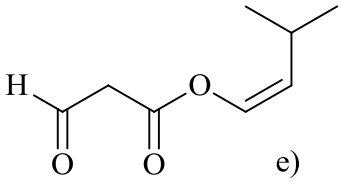
2. Which of the following is the correct stick representation of $(CH_3)_2CHCHCHCOOCH_2CHO$?


a)

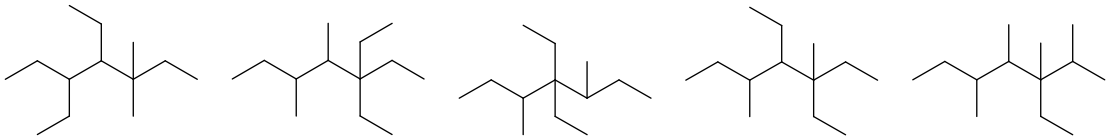

b)


c)

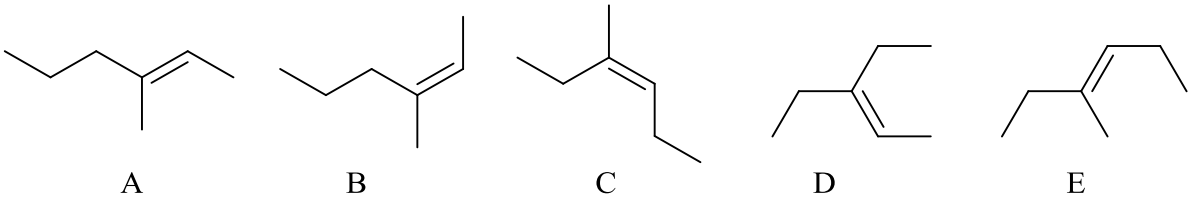

d)


e)

3. Which of the following stick representations is 3,4-diethyl-3,5-dimethylheptane?

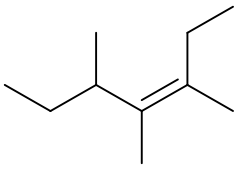

a) b) c) d) e)

4. What is the correct stick representation of (*E*)-3-methyl-3-hexene?

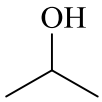

A B C D E

5. What is the correct name for the following compound?

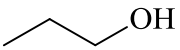
a) (*E*)-3,4,5-trimethyl-4-heptene
b) (*Z*)-3,4,5-trimethyl-3-heptene
c) (*E*)-3,4,5-trimethyl-3-heptene
d) (*E*)-2-ethyl-3,4-dimethyl-2-hexene
e) (*Z*)-2-ethyl-3,4-dimethyl-2-hexene



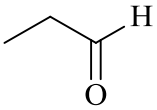
6. What is the major product from the addition of H_2O (using dilute H_2SO_4) to propene?



a)



b)



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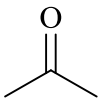
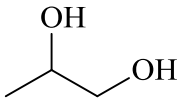


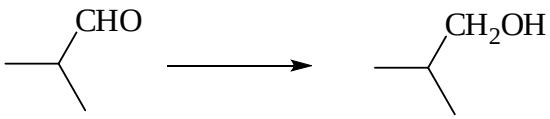
d)



e)

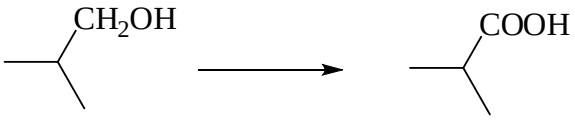
7. Which term which best describes the overall mechanism of the following reaction?

a) Oxidation
b) Reduction
c) Elimination
d) Nucleophilic Substitution
e) Nucleophilic Addition



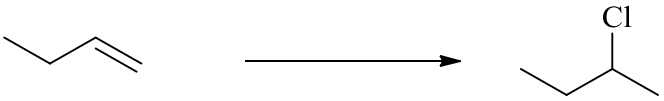
8. Which one of the following reagents would best effect the conversion shown?

a) H_2 / Pd catalyst
b) $NaBH_4$ followed by H^+/H_2O
c) $Cr_2O_7^{2-}/H^+$
d) hot conc. H_2SO_4
e) hot dilute OH^-



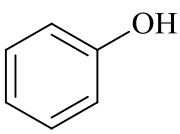
9. Which one of the following reagents would best effect the conversion shown?

a) $SOCl_2$
b) $NaBH_4$ followed by H^+/H_2O
c) CH_3Cl
d) Cl_2
e) HCl

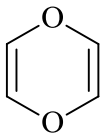


10. Which of the following compounds are aromatic?

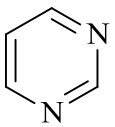
a) V, X, Y
b) W, Y, Z
c) V, X
d) V, X, Z
e) all of them



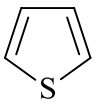
V



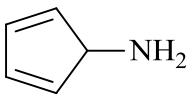
W



X



Y



Z

Correct answers: 1E, 2D, 3D, 4E, 5B, 6A, 7B, 8C, 9E, 10A