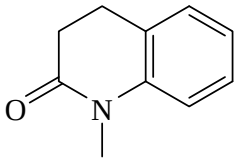
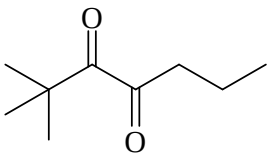
Chem1108	**Sample Quiz 2**	**Last update: 18/4/11**

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

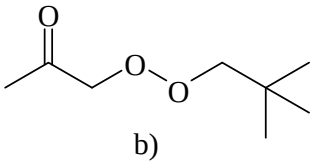
a) C_9H_9NO
b) $C_9H_{10}NO$
c) $C_{10}H_{10}NO$
d) $C_{10}H_{11}NO$
e) $C_{10}H_{12}NO$



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



a)



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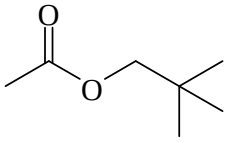

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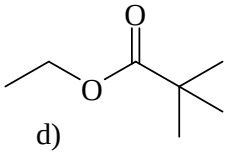
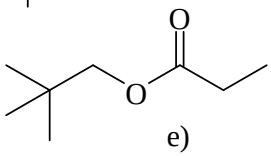
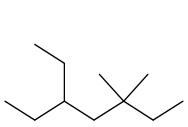


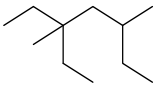
d)



e)

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


a)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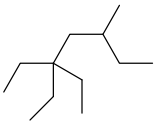
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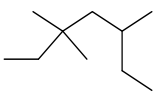
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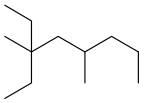
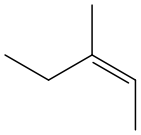
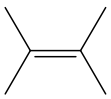

e)

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


A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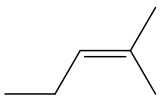
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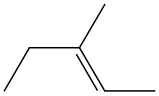
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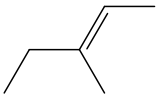
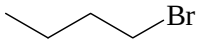
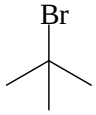

E

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



a)



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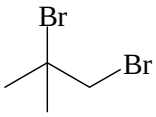

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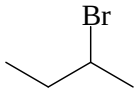
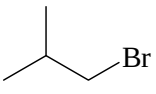


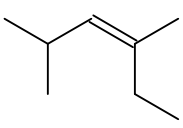
d)



e)

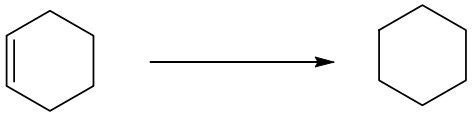
6. What is the correct name for the following compound?

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

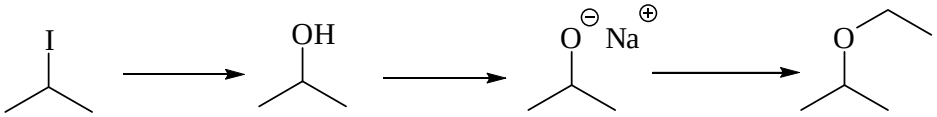


7. Which term which best describes the overall mechanism of the following reaction?

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

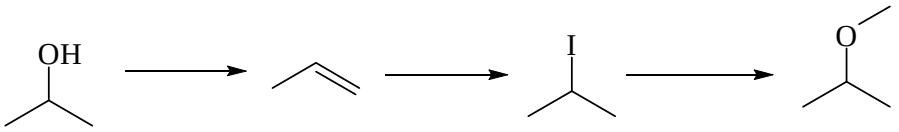


8. The reagents and reaction conditions to carry out the transformations below are:



a) (i) $Zn/H^{+}H_2O$ (ii) NaOH (iii) CH_3CH_2Br
b) (i) dilute NaOH (ii) conc. NaOH (iii) CH_3CH_2Br
c) (i) hot dilute NaOH (ii) Na (iii) CH_3CH_2OH
d) (i) hot dilute NaOH (ii) Na (iii) CH_3CH_2Cl
e) (i) hot conc. H_2SO_4 (ii) NaOH (iii) $NaOCH_2CH_3$ in ethanol

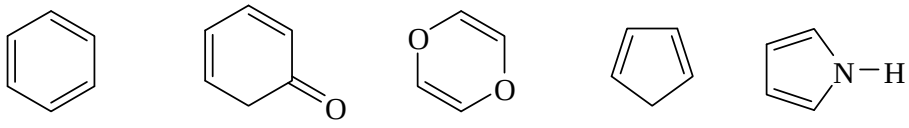
9. The reagents and reaction conditions to carry out the transformations below are:



a) (i) hot conc. NaOH (ii) I_2 (iii) $NaOCH_3$ in methanol
b) (i) hot conc. H_2SO_4 (ii) HI (iii) $NaOCH_3$ in methanol
c) (i) hot dilute NaOH (ii) I_2 (iii) CH_3OH
d) (i) hot dilute NaOH (ii) HI (iii) CH_3OH
e) (i) hot conc. H_2SO_4 (ii) I_2 (iii) CH_3OH

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, 4A, 5D, 6E, 7B, 8D, 9B 10D