

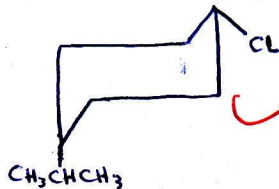


15
 Thank you

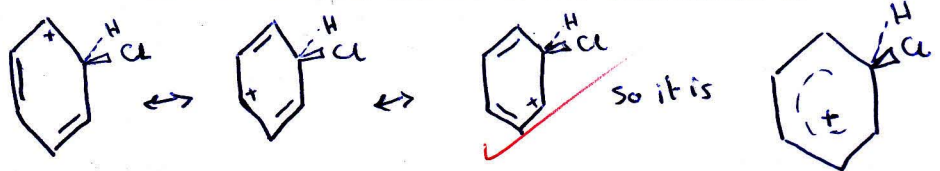
Name: <u>تالا عسان الحياحات</u> Student ID.No.: ... Date: 26.3.2012.	The University of Jordan Chemistry Department Organic Chemistry 233	
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Q1 Answer each of the following:

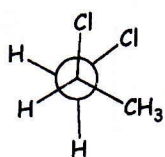
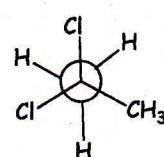
1- Draw the least stable chair conformation of *cis*-1-chloro-4-isopropylcyclohexane.

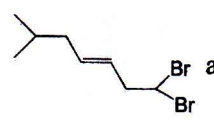
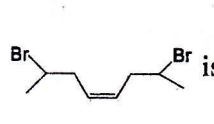


2- Draw the structure of the carbocation intermediate in the chlorination of benzene

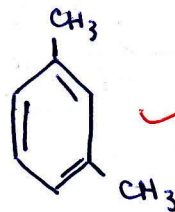


3- The relationship between  and  is... cis-trans isomers
Configurational isomers

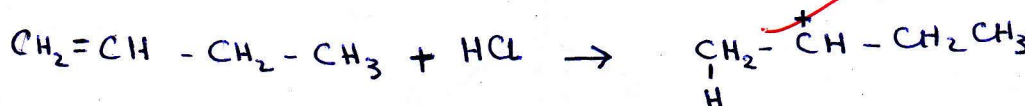
4- The relationship between  and  is... structural isomers
(Constitutional isomers)

5- The relationship between  and  is... structural isomers

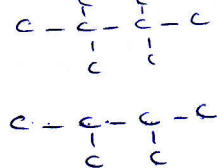
6- Draw the structure of m-xylene



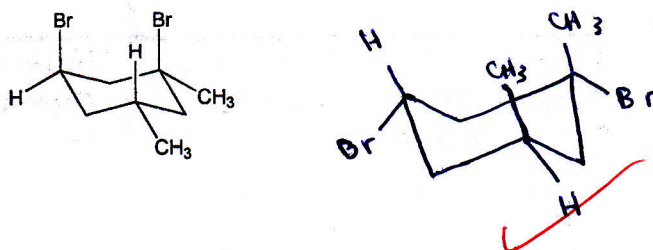
7- Draw the structure of the intermediate of the reaction of 1-butene and hydrochloric acid



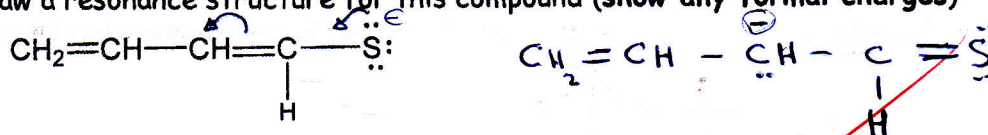
7



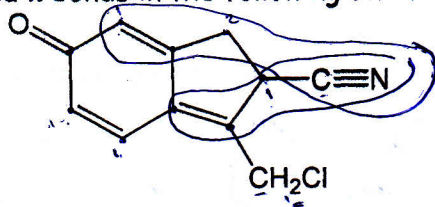
8- Draw the ring flip of this compound



9- Draw a resonance structure for this compound (show any formal charges)

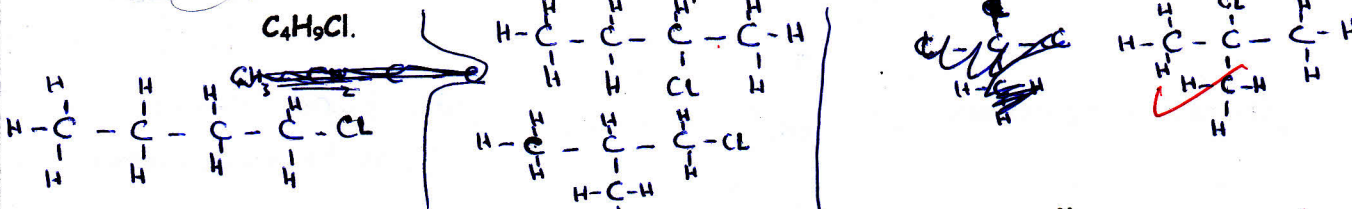


10- Circle the isolated π bonds in the following structure

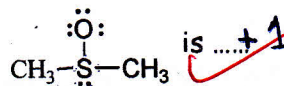


11- The molecular formula of the compound in question 10 is $\text{C}_{11}\text{H}_{18}\text{OClN}$

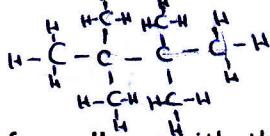
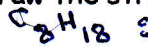
12- Draw structural formulas for all possible isomers having the molecular formula



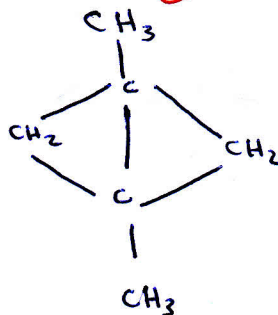
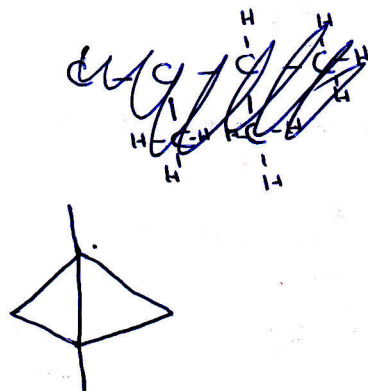
13- The formal charge on the sulfur atom in this structure

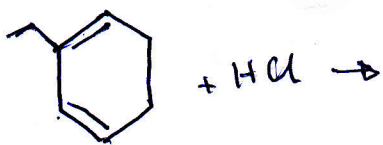


14- Draw the structural isomer of octane which has the lowest boiling point.



15- Draw the structure of an alkane with the formula C_6H_{10} that gives only two monochloro product upon reaction with Cl_2/light .

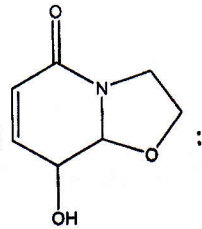




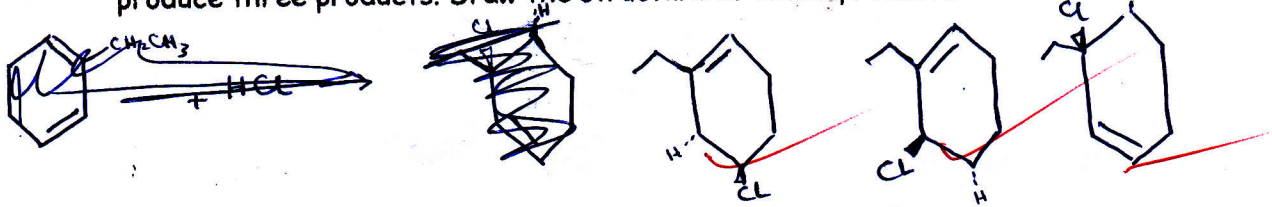
0
11 - N

16- Name all the functional groups present in this compound

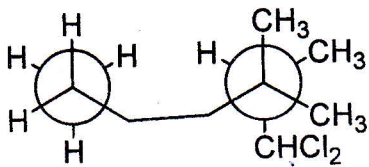
~~ketone~~ / alcohol / ether / alkene
amide



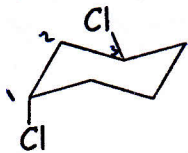
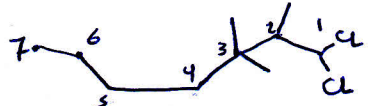
Q2: Reaction of 2-ethyl-1,3-cyclohexadiene with one mole of hydrochloric acid will produce three products. Draw the structure of these products



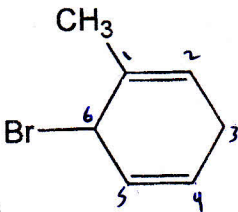
Q3 Give the IUPAC Name of each of the following compounds:



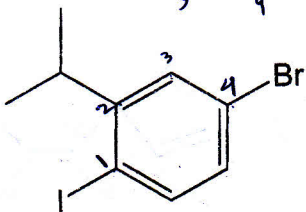
1,1-dichloro-2,3,3-trimethyl heptane



trans-1,3-dichloro cyclohexane

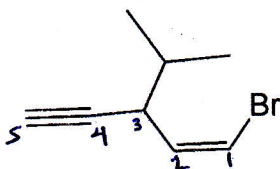


6-Bromo-1-methyl-1,4-cyclohexadiene



~~4-Bromo-2-isopropyl-1-Iodo~~

4-Bromo-1-Iodo-2-isopropyl benzene



cis-1-Bromo-3-isopropyl-1-penten-4-yne



14

1000
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000

Q4: write the missing reactants/reagents/products in each of the following reaction.

