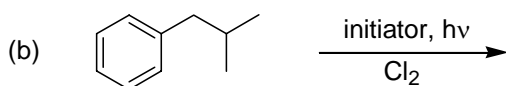
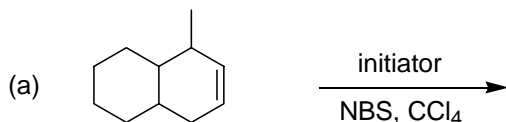


CHEM 201 (092)
Quiz # 3
Total points = 20

Name _____

ID _____

1. Predict the major product (s), including the stereochemistry where appropriate, for each of the following reactions: [4]

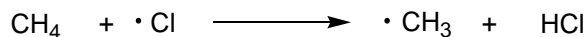


2. Give an example of the following (complete chemical structure is required): [2]

(a) Free radical initiator:

(b) Free radical inhibitor:

3. Consider the following reaction:



The reaction has activation energy (E_a) of + 17 KJ/mol and ΔH° of + 4 KJ/mol. Draw a reaction energy diagram for this reaction. Clearly show the reactant, product and the transition state in the diagram. [4]

4. Consider the structure of a **monomer** is: $\text{CH}_2=\text{CHCN}$ [10]

(a) Draw a general structure of the polymer

(b) Draw structures of *head to tail* and *head to head and tail to tail* forms of the polymer

(c) Draw a structure of **isotactic** type of the polymer

(d) Draw a complete mechanism of the formation of the *head to head* polymer.

Dr. M. R. Imam
03/05/2010