CH1012 Tutorial 8

## Name:

1. Identify each of the following reactions as addition, elimination or substitution reactions.



2. Define each of the following, illustrate with an example of each:

(i) carbocation

3. For the following half reactions work out if the organic transformation is a redox process and, if it is, state if it is a reduction or an oxidation and work out how many electrons are transferred.



<sup>(</sup>ii) radical

distinguish between propane and propyne.

Write down equations for the reaction you propose and describe the differences you would expect to see with your chemical test.

2) Propyne:  $CH_3C \equiv CH + 2Br_2 \rightarrow CH_3CBr_2CHBr_2$ When the alkyne was bubbled through an aqueous bromine solution in the dark the yellow colour of the bromine would be lost as it reacted with the propyne to form the tetrabromopropane.

Draw the following molecules: isoprene, geraniol, limonene.
Illustrate the composition of geraniol and limonene in terms of linked isoprene units.

6. What is the major difference between the polymerisation reaction that results in the formation of proteins and the polymerisation that results in the formation of high density polyethylene (HDPE)?

7. Describe in detail the mechanism for the formation of 2-bromopropane from bromine and propane. Explain why this is the major product formed.