CHM 233 : Fall 2017
Quiz #12
Question 1
MC20r

The first step in the mechanism of the SN1 reaction that we will study later is the rate determining step, and is shown below for 4 isomeric alkyl bromides. Which isomeric alkyl bromide would you expect to react faster based on the Hammond postulate?

A
B
C
D

Question 2
MC26n

Which is MOST LIKELY to be the major product of the following reaction?

\[ \text{MeO}: \quad A \quad \text{MeO}: \quad B \quad \text{MeO}: \quad C \quad \text{MeO}: \quad D \]

Question 3
MCalkenesIh

Which is the expected major organic product of the following reaction?

\[ \text{Br}_2 \quad \text{EtOH (solvent)} \]

A
B
C
D
**Question 4**

MCalkenesIp

Which are the best reagents/conditions to perform the following reaction

![Chemical structure](image)

A  H₂O/H₂SO₄ (cat.)  
B  1. BH₃·THF  
     2. NaOH/H₂O₂  
C  conc. H₂SO₄/heat  
D  1. Hg(OAc)₂/H₂O  
     2. NaBH₄

**Question 5**

MCmixnd

For the reaction energy diagram corresponding to the following mechanism, how many energy minima will there be? (do not include the minima associated with the reactants or the products)

A  five minima  
B  six minima  
C  seven minima  
D  eight minima
Question 6
MC20o

How many transition states are involved in the following complex mechanism. You do not have to understand the details of this mechanism, just how many transition states are involved (hint, there is one transition state for each individual step in the mechanism).

A 4 transition states
B 5 transition states
C 6 transition states
D 7 transition states
Question 7
MC20q

Using the homolytic bond dissociation energies provided, which statement best describes the following reaction?

![Reaction Equation]

<table>
<thead>
<tr>
<th>B.D.E. (kcal/mol)</th>
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| C–O              | 86  
| O–H              | 111 |
| H–Br             | 88  |
| C–Br             | 68  |

A The reaction is exothermic by 41 kcal/mol
B The reaction is exothermic by 5 kcal/mol
C The reaction is endothermic by 5 kcal/mol
D The reaction is endothermic by 41 kcal/mol

Question 8

There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes

Going INTO the next midterm exam in this class, how confident are you on your ability to perform well?
A Very confident
B Somewhat confident
C Neutral
D Not very confident
E Definitely not confident
QUESTION 9
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes
Going INTO the next midterm exam in this class, how confident are you that you UNDERSTAND the material well?
A  Very confident
B  Somewhat confident
C  Neutral
D  Not very confident
E  Definitely not confident

QUESTION 10
There are NO INCORRECT answers to this question, ALL answers to this question will be considered correct for grading purposes
Going INTO the next midterm exam in this class, how confident are you that given an organic chemistry problem, you will not only understand it, you will also get the problem correct?
A  Very confident
B  Somewhat confident
C  Neutral
D  Not very confident
E  Definitely not confident