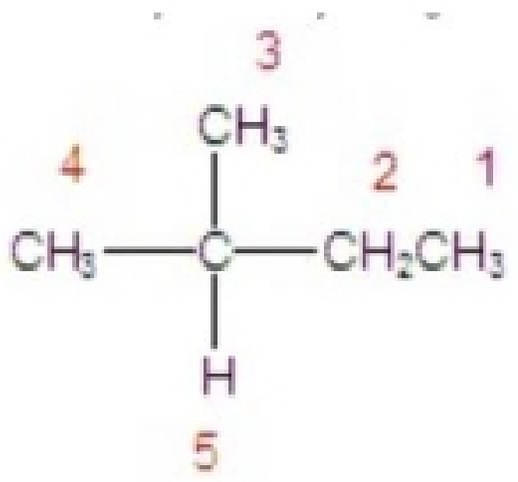
CHEM 232 Mock Exam II

Instructor:	Leuzzi/Nemsick	Name:	
Results:	/52	Class:	CHEM 232
		Section:	M1 | M2 | M3 | M4
		Date:	03/03/2017

This exam contains 12 pages and 18 questions. You will have 40 minutes to complete this exam. Good luck!

Part 1: Multiple Choice

1. Identify the hydrogen that will react the fastest in a radical halogenation reaction.

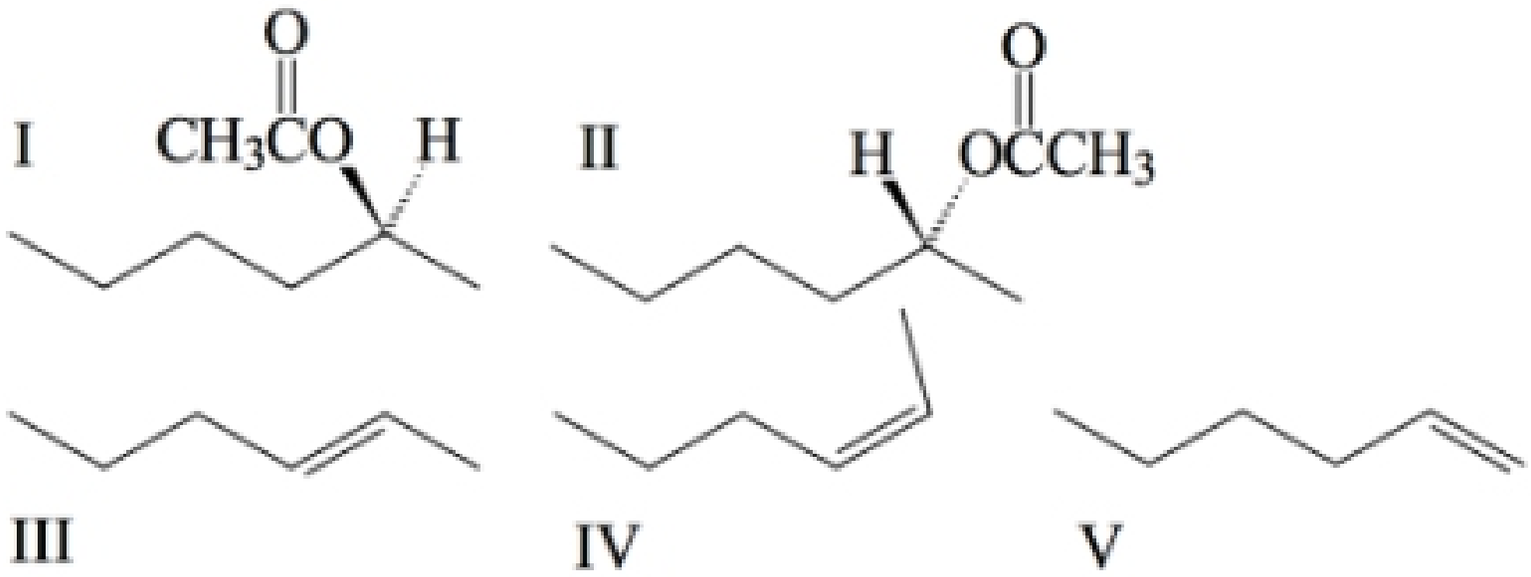


   a. 1
   b. 2
   c. 3
   d. 4
   e. 5

2. Naproxen, a nonsteroidal anti-inflmmatory drug that is the active ingredient in Aleve, has a specific rotation of + 66. One comcercial presentaiton reuslts in a mixture with a 97% enatiomeric excess. What percent of (+) enantiomer is obtained from the commercial preparation?

   a. 78.6%
   b. 50.23%
   c. 98.5%
   d. 10.8%
   e. 1.5%

3. What would be the major product(s) that would form from the reaction of (S)-2-bromohexane with acetate ion (CH_3COO^-) at room temperature if the reaction exhibits second order kinetics?



a. I

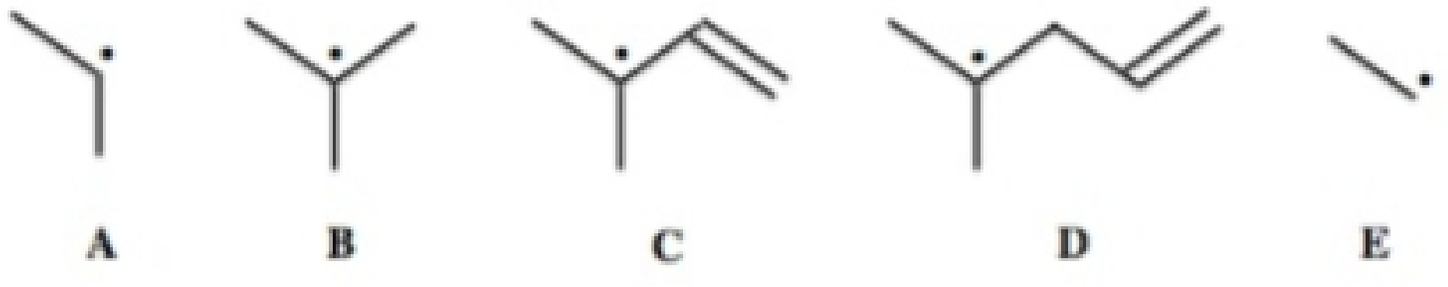
b. II

c. I & II (Equal amounts of both)

d. III & IV (Equal amounts of both)

e. V

4. The most stbale radical is _____. The least stable radical is _____.



a. D & E

b. E & C

c. D & A

d. C & E

e. B & E

5. Which of the following best explains why the SN1 reactions of alkyl halides with a neutral reactant are FASTER in polar solvents?

a. The nucleophile is solvated by polar solvents.

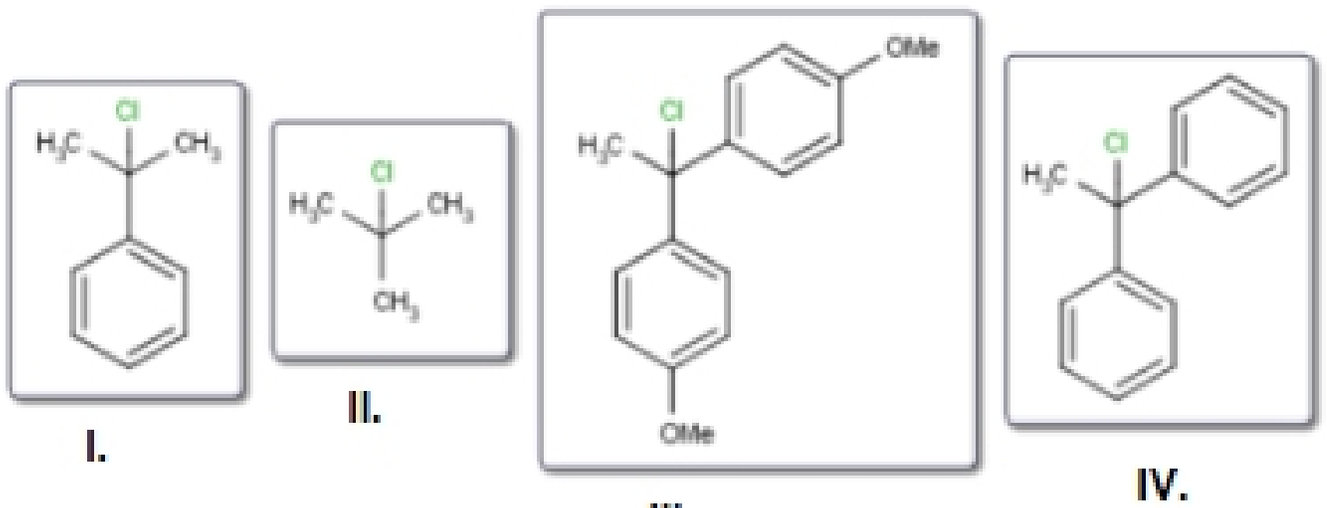
b. Solvation by polar solvents stabilizes the transition state.

c. Solvation by polar solvents stabilizes the carbocation.

d. The substrate is less soluble in polar solvents.

e. The substrate is more soluble in polar solvents.

6. Which of these organic chlorides will have the fastest rate of hydrolysis in water-acetone at 25 C?



a. I

b. II

c. III

d. IV

e. They will all react relatively slow due to the bulky substituents.