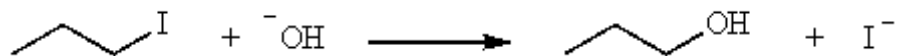


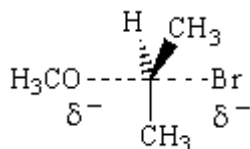
1. Which of the following is an incorrect representation of relative nucleophile strength?

- A) $\text{NH}_2^- > \text{F}^-$
- B) $\text{HO}^- > \text{HS}^-$
- C) $\text{CH}_3^- > \text{HO}^-$
- D) $\text{CH}_3\text{O}^- > \text{CH}_3\text{OH}$
- E) $\text{I}^- > \text{Br}^-$

2. What is the mechanism of the following reaction?

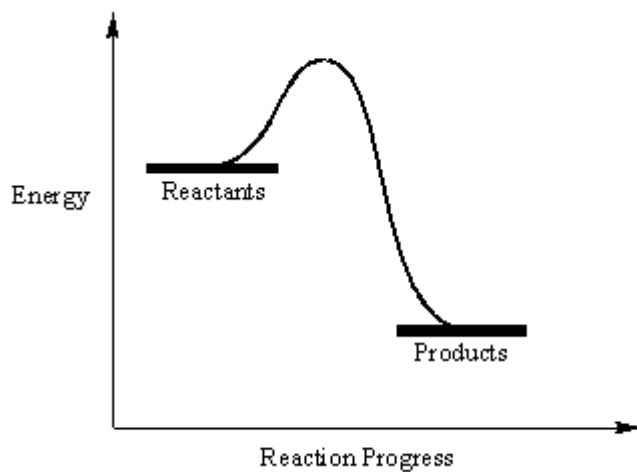


- A) $\text{S}_{\text{N}}1$
 - B) $\text{S}_{\text{N}}2$
 - C) E1
 - D) E2
 - E) both A and B
3. Which statement is true for $\text{S}_{\text{N}}2$ reactions?
- A) The rate of the reaction is dependent on the stability of a carbocation.
 - B) The rate of reaction is dependent on just the substrate.
 - C) The fastest reaction will occur with a tertiary halide.
 - D) Displacement occurs with inversion of configuration.
 - E) The mechanism is a two step process.
4. The structure below represents the transition state for the reaction of



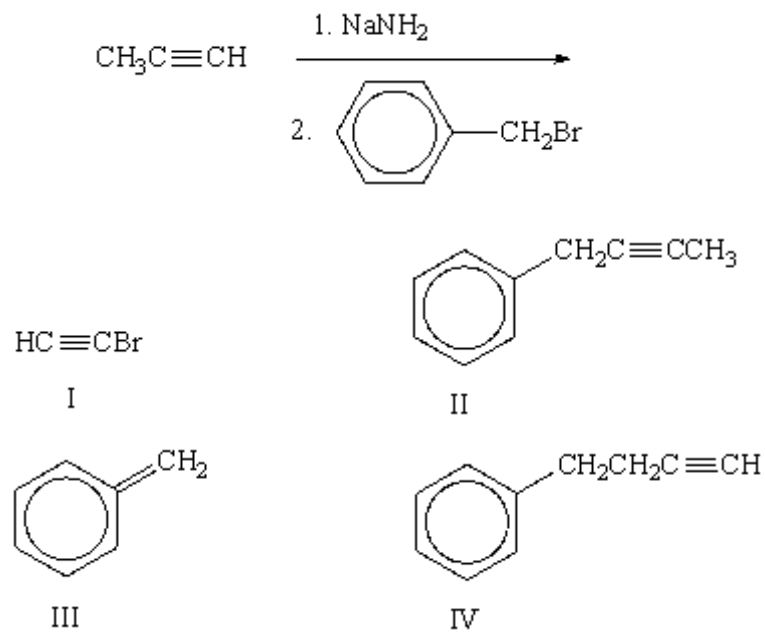
- A) methanol with 2-bromopropene.
 - B) methoxide with 2-bromopropane.
 - C) sodium bromide with isopropyl methyl ether.
 - D) methanol with 2-bromopropane.
 - E) methoxide with 1-bromopropane.
5. When 1-bromobutane is reacted with the bulky base, potassium *tert*-butoxide, in *tert*-butyl alcohol, the major elimination product is:
- A) 1-butene
 - B) *cis*-2-butene
 - C) *trans*-2-butene
 - D) butyl *tert*-butyl ether
 - E) butyl alcohol

6. The energy-reaction diagram below is for



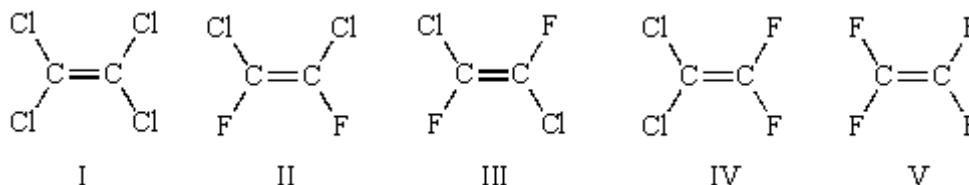
- A) an S_N2 reaction only.
- B) an S_N1 reaction only.
- C) an E2 reaction only.
- D) an E1 reaction only.
- E) an S_N1 or E1 reaction.
- F) an S_N2 or E2 reaction

7. . What is the final product of the following sequence of reactions?



- A) I
- B) II
- C) III
- D) IV
- E) III and IV

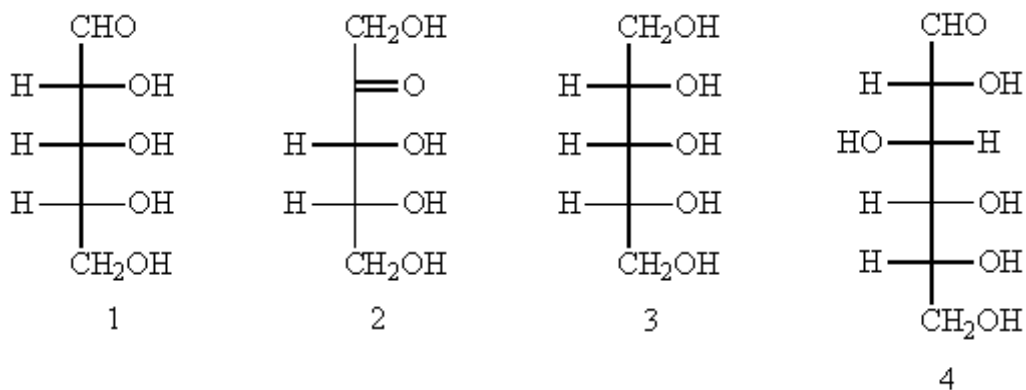
8. Which of the following halocarbons is the raw material for the synthesis of Teflon?



- A) I
- B) II
- C) III
- D) IV
- E) V

Chapter 16 Questions

1. Which of the following can be classified as an aldopentose?



- A) 1
- B) 2
- C) 3
- D) 4
- E) 3 and 4

2. Glucose can be classified as a:

- A) monosaccharide
- B) disaccharide
- C) trisaccharide
- D) polysaccharide
- E) table sugar

3. Which of the following can be considered a polysaccharide?
- A) sucrose
 - B) cellobiose
 - C) lactose
 - D) maltose
 - E) cellulose
4. The difference between the pyranose and furanose forms of a given aldohexose is:
- A) the ring size
 - B) the number of the anomeric C
 - C) the type of functional groups
 - D) the number of functional groups
 - E) there is no difference