

1. What will be the products when reactants are alcohol & thionyl chloride in the presence of pyridine?

- A. $\text{RC?} + \text{S} + \text{HC?}$
C. $\text{RC?} + \text{SO}_2 + \text{H}_2\text{O}$

- B. $\text{RC?} + \text{SO}_2 + \text{HC?}$
D. $\text{RC?} + \text{S} + \text{H}_2\text{O}$

Answer: Option **B**

2. Which C-X bond has the highest bond energy per mole?

- A. C-F
C. C-Br

- B. C-C?
D. C-I

Answer: Option **A**

3. Which alkyl halide has the highest reactivity for a particular alkyl group?

- A. R-F
C. R-Br

- B. R-C?
D. R-I

Answer: Option **D**

4. Ethyl chloride with nascent hydrogen produces

- A. methane
C. propane

- B. ethane
D. butane

Answer: Option **B**

5. Which one is not a nucleophile?

- A. $\text{C}_2\text{H}_5\text{O}^-$
C. NH₃

- B. SCN⁻
D. H₃C⁺

Answer: Option **D**

6. The number of molecules taking part in the rate determining step is called

- A. Order of reaction B. Rate of reaction
C. Mole of a reaction D. Extent of a reaction

Answer: Option A

7. During SN2 mechanism carbon atom changes its state of hybridization as

- A. $sp^2?sp^2$ B. $sp^2?sp^3$
C. $sp^3?sp$ D. $sp^3?sp^2$

Answer: Option D

8. What will be the order of reaction of a reaction whose rate can be expressed as $R = K [A] [B]$?

- A. Zero B. One
C. Two D. Three

Answer: Option C

9. Which one among the following is not a good leaving group?

- A. HSO_4^- B. $C_6H_5^-$
C. OH^- D. Br^-

Answer: Option C

10. What is the order of kinetics in the SN1 mechanism?

- A. Zero B. First
C. Second D. Third

Answer: Option B