

<b>CHEMISTRY-12</b>	<b>Chapter # 10 (Complete) Test: C-1</b>		
	Name:	Class:	ID:
Date: / /	<b>Marks</b>	<b>40</b>	<b>Marks Obtained:</b>
Time Allowed: 75 Min.	<b>Total:</b>		

Maximum Marks: 08      **(OBJECTIVE TYPE)**      Time Allowed: 15 Min.

**NOTE:** Tick The Correct Option:

- For which mechanisms, the first step involved is the same:
  - E1 and E2
  - E2 and  $S_N2$
  - $S_N1$  and E2
  - E1 and  $S_N1$
- Alkyl halides are considered to be very reactive compounds towards nucleophiles, because:
  - They have an electrophilic carbon
  - They have an electrophilic carbon and a good leaving group
  - They have an electrophilic carbon and a bad leaving group
  - They have a nucleophilic carbon and a good leaving group
- When ethyl magnesium bromide is reacted with HCHO, followed by acid hydrolysis, the product formed is:
  - Ethanol
  - 1-Propanol
  - 2-Propanol
  - Ethanoic acid
- The bond energy of C-Cl bond is:
  - 467 kJ mol<sup>-1</sup>
  - 413 kJ mol<sup>-1</sup>
  - 346 kJ mol<sup>-1</sup>
  - 290 kJ mol<sup>-1</sup>
- Nucleophiles may be:
  - Positively charged
  - Negatively charged
  - Neutral
  - Both 'b' & 'c'
- Grignard reagent is prepared by the reaction of Mg with alkyl halides in the presence of:
  - Water
  - Aqueous KOH
  - Alcoholic KOH
  - Dry ether
- Alkanes can be prepared by reacting Grignard reagent with:
  - Water
  - Ammonia
  - Alcohols
  - All
- Secondary alcohols can be prepared by the reaction of Grignard reagent with:
  - Water
  - Methanal
  - Ethanal
  - Propanone

Maximum Marks: 32      **(SUBJECTIVE TYPE)**      Time Allowed: 60 Min.

### SECTION-I

**Q.2: Give brief answers to the following questions:**

**(20)**

- i. Give classification of alkyl halides.
- ii. Write IUPAC names of: a)  $(\text{CH}_3)_3\text{C}-\text{CH}_2-\text{Cl}$  b)  $(\text{CH}_3)_2\text{CHBr}$
- iii. Discuss the effect of bond energy on the reactivity of alkyl halides.
- iv. Define nucleophile and electrophile. Give examples.
- v. What are  $\beta$ -elimination reactions?
- vi. Convert  $\text{C}_2\text{H}_5\text{Br}$  to  $(\text{C}_2\text{H}_5)_2\text{NH}$ .
- vii. What is Grignard reagent? What is their importance?
- viii. Starting from suitable Grignard reagent, prepare ethane and ethyl cyanide
- ix. How does Grignard reagent react with acetone?
- x. How is ethane converted into 1-Butanol?

## SECTION-II

**NOTE:** Attempt All Questions:

**(12)**

**Q.3: Define alkyl halides. Give three methods to prepare them from alcohols.**

**Q.4: Differentiate between  $\text{S}_{\text{N}}1$  and  $\text{S}_{\text{N}}2$  reactions.**

**Q.5: Complete the following chemical reactions:**

