

12251
CHEMISTRY
Abbottabad 2025
PART-II

P-397

Time: 2 Hours 40 Minutes

SECTION-B

Marks: 40

1. Attempt any ten of the following short questions. Each question carries 4 marks
- i. What is the trend in thermal stability of nitrates, carbonate of group II-A metals?
 - ii. Why transition metal exhibits variable oxidation states?
 - iii. Why is Cn^{+1} diamagnetic and Cn^{+2} paramagnetic in nature?
 - iv. What is the origin and chemical composition of petroleum?
 - v. What is geometrical Isomerism?
 - vi. What are carbocations? Why is tertiary carbocation highly stable?
 - vii. How can ketones be oxidized?
 - viii. How can carboxylic acids be decarboxylated?
 - ix. Why are alkenes more reactive than alkynes?
 - x. What is Lucas Test? How it helps to distinguish alcohols?
 - xi. How can ether be prepared by Williamson synthesis?
 - xii. Why are halogens ortho/para directing?
 - xiii. What is Grignard reagent? How can it be prepared?

SECTION-C

Marks: 27

NOTE: Attempt any three of the following questions. Each question carries 9 marks.

2. Explain the acid-base behaviour of group IV-A oxides.
3. Discuss in detail the important chemical reaction of alkenes.
4. What are phenols? Explain the structure and acidic behaviour of phenols.
5. Discuss in detail the structure, acidity and factors affecting the acidity of carboxylic acids.