



B.K. BIRLA CENTRE FOR EDUCATION

SARALA BIRLA GROUP OF SCHOOLS
A CBSE DAY-CUM-BOYS' RESIDENTIAL SCHOOL



Post Mid Term Examination 2025-26

CHEMISTRY (043)

Class : XI
Date : 08/01/2026

Duration: 1 Hr
Max. Marks: 25

Instructions:

- i. There are three sections A, B, and C with 13 questions in total.
- ii. Section A has 3 Multiple Choice Questions and 2 Assertion Reasoning based Question of one mark each.
- iii. Section B has 4 questions of two marks each and Section C has 4 questions of three marks each.
- iv. All questions are compulsory.
- v. Calculators are not allowed.

Section A

1. Which of the following is an example of an electrophile? 1
(a) CH_3^+ (b) CH_3^- (c) OH^- (d) C_2H_5^-
2. Identify the correct IUPAC name of CH_3CHO . 1
(a) 1-Butene (b) Ethanal (c) Butanal (d) Propene
3. What is the general formula of an alkyne? 1
(a) C_nH_{2n} (b) $\text{C}_n\text{H}_{2n+2}$ (c) $\text{C}_n\text{H}_{2n-2}$ (d) $\text{C}_n\text{H}_{2n+3}$

Assertion-Reasoning (A/R) Q N0. 4 to 5.

- (a) Both A and R are correct, and R explains A.
- (b) Both A and R are correct, but R does not explain A.
- (c) A is correct, but R is incorrect.
- (d) A is incorrect, but R is correct.

4. Assertion (A): Alkanes are saturated hydrocarbons. 1
Reason (R): Alkanes contain only sigma bonds between carbon atoms.
5. Assertion (A): Cis isomers is more than trans isomer. 1
Reason (R): Benzene undergoes addition reactions readily.

Section B

6. Write the short notes on hyperconjugation. 2

7. Differentiate between homolytic and heterolytic bond fission with suitable examples. 2

8. Write the structure and IUPAC name of the following compounds:
(a) An alkene with 5 carbon atoms having a double bond at the second position.
(b) A straight-chain alkyne with 4 carbon atoms. 2

9. Explain the term +I and -I effect with suitable examples. 2

Section C

10. Explain the Nitration reaction with its mechanism. 3

11. Explain the following reactions:
(i) Decarboxylation (ii) Wurtz reaction 3

12. Convert the following:
(a) Ethene to Ethane.
(b) Methane to Ethane
(c) Benzene to Nitrobenzene. 3

13. Write short notes on the following:
(a) Conformation of ethane.
(b) Ozonolysis of But-2-ene followed by zinc dust distillation. 3

-----All the Best-----