



B.K. BIRLA CENTRE FOR EDUCATION

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

Pre-MidTerm-Test 2026-27

CHEMISTRY (043) SET-2

Class : XI
Date : 22 /07/2026
Admission No.:

Duration: 1 Hr
Max. Marks: 25
Roll No.:

General Instructions:

- There are 13 questions in all. All questions are compulsory.
- This question paper has three sections: Section A, Section B and Section C.
- All the sections are compulsory.
- Section A contains five questions of 1 mark each, out of which one question is assertion and reasoning type question.
- Section B contains four questions of two marks each, Section C contains four questions of three marks each.
- There is no overall choice. Use of calculators is not allowed.

SECTION-A

- A pure substance which contains only one type of atom is called _____.
(a) An element (b) A compound (c) A solid (d) A liquid 1
- The significant figure of 200.0
(a) 1 (b) 2 (c) 3 (d) 4 1
- Electronic configuration of O (8) is
(a) $1s^2 2s^2 2p^2$ (b) $1s^3 2s^3 2p^1$ (c) $1s^2 2s^2 2p^4$ (d) $1s^2 2s^3 2p^2$ 1
- Find out the number of neutrons, protons, and electrons of ${}_{17}\text{Cl}^{37}$, respectively.
(a) 20, 20, 17 (b) 17, 17, 20
(c) 20, 17, 17 (d) 17, 17, 17 1
- The following question consist of two statements. While answering these questions, you are required to choose any one of the following four responses.
a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion
b. Both Assertion and Reason are correct but Reason is not the correct explanation for Assertion.
c. Assertion is correct but Reason is incorrect
d. Assertion is incorrect but Reason is correct.

Assertion (A) : 505.0 has more significant than 505.

Reason (R) : 505.0 has more accuracy than 505.

SECTION – B

- State and explain the drawbacks of Rutherford's nuclear model of the atom. 2
- Explain the terms isotopes and Isobars with examples. 2
- Calculate the molarity of NaOH in the solution prepared by dissolving its 4 g in enough

- water to form 250 mL of the solution. (At masses of Na=23 O =16 H=1) 2
9. Express the following in terms of scientific notation (i) 0.00048 (ii) 80008 2

SECTION C

10. How many moles of methane are required to produce 22g CO₂ (g) after combustion? Write balance chemical equation 3
11. Explain the terms (i) Molarity (ii) molality and (iii) mole fraction. 3
12. Find the energy of each of the photons which
(i) corresponds to light of frequency 3×10^{15} Hz. (ii) have a wavelength of 0.50 Å. 3
13. The Vividh Bharati station of All India Radio, Delhi, broadcasts on a frequency of 1,368 kHz (kilo hertz). Calculate the wavelength of the electromagnetic radiation emitted by the transmitter. Which part of the electromagnetic spectrum does it belong to? 3

-----ALL THE BEST-----