



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-1

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

- The number of atoms in 4.25g of NH_3 is approximately. (Given at masses N=14 H=1) 1
(a) 4×10^{23} (b) 2×10^{23} (c) 1.5×10^{23} (d) 6×10^{23}
- The mass of an atom of carbon is _____. 1
(a) 1g (b) 1.99×10^{-23} g (c) 1/12 g (d) 1.99×10^{23} g
- Electronic configuration of F(9) is 1
(a) $1s^2 2s^2 2p^5$ (b) $1s^3 2s^3 2p^1$ (c) $1s^2 2s^2 2p^4$ (d) $1s^2 2s^3 2p^2$
- The SI unit for temperature is: 1
(a) Fahrenheit (b) Celsius
(c) Kelvin (d) Rankine
- The following question consist of two statements,.While answering the questions, you are required to choose any one of the following four responses 1
 - Both Assertion and Reason are correct and Reason is the correct explanation for Assertion
 - Both Assertion and Reason are correct but Reason is not the correct explanation for Assertion.
 - Assertion is correct but Reason is incorrect
 - Assertion is incorrect but Reason is correct.

Assertion: 1 mole of sulphuric acid contains 32 g each of sulphur and oxygen element.
Reason: 1 mole of sulphuric acid represents 98 g of the species. (H=1 S=32 O=16)

SECTION – B

- State and explain the law of constant proportion with a suitable example 2
- The wavelength range of the visible spectrum extends from violet (400 nm) to red (750 nm).

- Express these wavelengths in frequencies (Hz). ($1\text{nm} = 10^{-9}\text{ m}$) 2
8. Determine the empirical formula of an oxide of iron, which has 70% Iron and 30% oxygen by mass. 2
(Given Atomic masses of Fe =56 and O=16)
9. Express the following in terms of scientific notation (i) 0.0048 (ii) 8008 2

SECTION C

10. 56 kg of N_2 and 10 kg of H_2 are mixed to produce NH_3 . Calculate the amount of NH_3 formed.
Identify the limiting reagent in the production of ammonia in this situation. 3
(Atomic masses of H-1 gm N- 14 gm)
11. Explain the term (i) Molarity (ii) molality and (iii) mole fraction 3
12. Explain the term Atomic number, mass number, and Isotopes with suitable examples 3
13. Calculate (a) the wavenumber and (b) frequency of yellow radiation having wavelength $5800\text{ \AA}$. 3

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