

MHT CET 2026 May 19 Shift 1

Question Paper (Memory-Based)

Conducted by Maharashtra State CET Cell



General Instructions

- (i) **Duration:** The total duration of the examination is 3 hours (180 minutes).
- (ii) **Total Marks:** The complete paper carries a maximum of 200 marks.
- (iii) **Structure:** The paper has 3 Sections:
 - **Section A:** 50 Multiple Choice Questions (Physics)
 - **Section B:** 50 Multiple Choice Questions (Chemistry)
 - **Section C:** 50 Multiple Choice Questions (Mathematics)
- (iv) **Compulsory Questions:** All 150 questions are compulsory.
- (v) Each question has four options. Only **one** option is correct.
- (vi) **Right Answer:** +1 marks for Physics and Chemistry Questions. +2 marks for Mathematics Questions
- (vii) **Incorrect Answer:** (No Negative marking).
- (viii) **Unanswered/Marked for Review:** 0 marks.

1. Which of the following compound is not in gaseous phase at 25°C?

- (1) ClF
- (2) BrF_3
- (3) IF_3
- (4) ClF_3

2. A solution is prepared by dissolving 2 gram of non-volatile solute in 500 mL solution at 27°C. The osmotic pressure of the solution is 0.82 atm. The molar mass of the solute is:

- (1) 100 g mol^{-1}
 - (2) 120 g mol^{-1}
 - (3) 150 g mol^{-1}
 - (4) 180 g mol^{-1}
-

3. What is the oxidation state of sulfur in Marshall's acid, $H_2S_2O_8$?

- (1) +4
 - (2) +5
 - (3) +6
 - (4) +7
-

4. What is formed when an alkyl cyanide reacts with sodium in ether?

- (1) Primary amine
 - (2) Secondary amine
 - (3) Alkene
 - (4) Alcohol
-

5. Which of the following is not amphoteric in nature?

- (1) NH_3
 - (2) HCl
 - (3) H_2O
 - (4) Cr_2O_3
-

6. The rate of reaction $A \rightarrow P$ is $1.25 \times 10^{-2} \text{ mol dm}^{-3} \text{ s}^{-1}$ when $[A] = 0.5 \text{ M}$. Calculate the rate constant if the reaction is second order in A.

- (1) 0.05
- (2) 0.04
- (3) 0.03
- (5) 0.01

7. Identify the unit of rate constant for a first-order reaction.

- (1) $\text{mol dm}^{-3}\text{s}^{-1}$
 - (2) s^{-1}
 - (3) $\text{mol}^{-1}\text{dm}^3\text{s}^{-1}$
 - (4) mol dm^{-3}
-

8. The magnetic moment of Cr^{3+} ion is 3.87 BM. The number of unpaired electrons present is:

- (1) 1
 - (2) 2
 - (3) 3
 - (4) 4
-

9. Oil of wintergreen is chemically known as:

- (1) Methyl acetate
 - (2) Methyl salicylate
 - (3) Ethyl salicylate
 - (4) Salicylic acid
-

10. Which of the following does not belong to Group 16 elements?

- (1) Oxygen
 - (2) Sulfur
 - (3) Selenium
 - (4) Chlorine
-