

MHT CET 2026 May 19 Shift 2

Question Paper (Memory-Based)

Conducted by CET Cell, Maharashtra



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 B:** 100 Multiple Choice Questions (Biology).
- (iv) **Compulsory Questions:** All 200 questions are compulsory.
- (v) Each question has four options. Only **one** option is correct.
- (vi) **Correct Answer:** +1 marks.
- (vii) **Incorrect Answer:** (No Negative marking).
- (viii) **Unanswered/Marked for Review:** 0 marks.

1. Which of the following statement is correct for vapor pressure?

- (A) Vapor pressure decreases with increase in temperature
- (B) Vapor pressure is independent of temperature
- (C) Vapor pressure increases with increase in temperature
- (D) Vapor pressure becomes zero at high temperature

2. Find the number of atoms present in 11.2 L of nitrogen gas at STP

- (A) 3.01×10^{23}
 - (B) 6.02×10^{23}
 - (C) 12.04×10^{23}
 - (D) 1.204×10^{23}
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3. Which of the following is true for entropy?

- (A) Entropy decreases with increase in randomness
 - (B) Entropy is the measure of randomness of a system
 - (C) Entropy remains constant in every process
 - (D) Entropy is always zero for gases
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4. Calculate the solubility in mol dm^{-3} of sparingly soluble salt BaBr if its solubility product is 4.9×10^{-13} at the same temperature.

- (A) 7×10^{-7}
 - (B) 7.5×10^{-7}
 - (C) 8×10^{-7}
 - (D) 4.9×10^{-7}
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5. Calculate the pH of 0.01 M strong dibasic acid.

- (A) 5.5
 - (B) 2.5
 - (C) 2.0
 - (D) 1.7
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6. The solubility product of PbCl_2 at 298 K is 3.2×10^{-5} . What is its solubility in mol dm^{-3} ?

- (A) 8×10^{-6}
- (B) 2×10^{-2}

(C) 5.6×10^{-3}

(D) 5×10^{-2}

7. Identify Base₂ for the following equation according to Brønsted-Lowry theory: $HCl(aq) + H_2O(l) \rightleftharpoons H_3O^+(aq) + Cl^-(aq)$

(A) $H_3O^+(aq)$

(B) $H_2O(l)$

(C) $Cl^-(aq)$

(D) $HCl(aq)$

8. What is the pH of 2×10^{-3} M solution of a monacidic weak base if it ionises to the extent of 5%?

(A) 14

(B) 10

(C) 4

(D) 2

9. A certain mass of a gas occupies a volume of 2.5 dm^3 at NTP. Calculate the change in volume of gas at the same temperature if pressure of gas is changed to 1.25 atm.

(A) 3.0 dm^3

(B) 0.5 dm^3

(C) 4.5 dm^3

(D) 1.5 dm^3

10. Identify conjugate acid and conjugate base for HCO_3^- ion respectively:

(A) CO_3^{2-} and H_2CO_3

(B) H_2CO_3 and CO_2

(C) CO_2 and H_2CO_3

(D) H_2CO_3 and CO_3^{2-}
