TS EAMCET 2025 May 3 Shift 1 Question Paper

| **Time Allowed :**3 Hours | **Maximum Marks : 160** | **Total Questions :**160 |

General Instructions

Read the following instructions very carefully and strictly follow them:

1. This question paper comprises 160 questions.

2. The Paper is divided into three parts- Biology, Physics and Chemistry.

3. There are 40 questions in Physics, 40 questions in Chemistry and 80 questions in Biology.

4. For each correct response, candidates are awarded 1 marks.

1. The molecular weight of a gas is 32. If 0.5 moles of the gas occupy 22.4 liters at standard temperature and pressure (STP), what is the density of the gas?

(a) 1.43 g/L

(b) 2.00 g/L

(c) 1.28 g/L

(d) 1.60 g/L

---

2. A wire of length L and cross-sectional area A has a Young's modulus Y. If the wire is stretched by a force F, the elongation produced in the wire is:

(a) $\frac{F}{A \cdot Y}$

(b) $\frac{F \cdot L}{A \cdot Y}$

(c) $\frac{A \cdot Y}{F}$

(d) $\frac{L}{A \cdot Y}$

---

3. The value of the integral $\int_0^1 x^2 \, dx$ is:

(a) $\frac{1}{3}$

(b) $\frac{1}{2}$

(c) $\frac{1}{4}$

(d) 1

---

4. A body is projected vertically upward with an initial velocity of 40 m/s. Calculate the maximum height reached by the body. (Take $g = 9.8 \, \text{m/s}^2$)

(a) 80.4 m

(b) 160.8 m

(c) 100 m

(d) 120 m

---

5. The rate of a reaction doubles when the temperature is raised by 10°C. Which of the following options represents the value of activation energy E_a for this reaction?

(a) 30 kJ/mol

(b) 60 kJ/mol

(c) 120 kJ/mol

(d) 100 kJ/mol

---

6. If the roots of the quadratic equation $ax^2 + bx + c = 0$ are real and distinct, then which of the following conditions must be true?

(a) $b^2 - 4ac > 0$

(b) $b^2 - 4ac = 0$

(c) $b^2 - 4ac < 0$

(d) $a + b + c = 0$