

MHT CET 2026 Mathematics Memory Based Question paper PDF

Physics

1. The capacitance of an infinite circuit formed by the repetition of the same link consisting of two identical capacitors, each with capacitance C , as shown in the figure is:
(a) Zero
(b) $\frac{(\sqrt{5}-1)C}{2}$
(c) $\frac{(\sqrt{5}+1)C}{2}$
(d) Infinite
2. A 1.5 kg block is attached to a spring with spring constant $k = 100 \text{ N m}^{-1}$ and displaced by 0.2 m. Calculate the potential energy stored in the spring.
(a) 1 J
(b) 2 J
(c) 3 J
(d) 4 J

Mathematics

3. Evaluate the integral:

$$\int_3^5 |x - 4| dx$$

- (a) 1
(b) 2
(c) 3
(d) 4
4. Evaluate the definite integral:

$$\int_0^{\pi/2} \sin^2 x dx$$

- (a) $\frac{\pi}{2}$
(b) $\frac{\pi}{4}$
(c) $\frac{\pi}{8}$
(d) π

Chemistry

5. What product is formed when a ketone reacts with hydrazine ($\text{NH}_2 - \text{NH}_2$)?
- (a) Alcohol
 - (b) Hydrazone
 - (c) Amide
 - (d) Ester

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