AP EAPCET 2026 May 13 Shift 1

Question Paper (Memory-Based)

Conducted by National Testing Agency (NTA)

General Instructions

(i) The test is of 3 hours duration.

(ii) This test paper consists of 160 questions. The maximum marks are 160.

(iii) Physics and Chemistry contains 40 questions each and Mathematics contains 80 questions.

(iv) Each question carries +1 marks for correct answer and there is no negative marking for wrong answer.

1. The value of c of Lagrange's Mean Value Theorem for $f(x)=\sqrt{25-x^2}$ on $[1,5]$ is

(A) $\sqrt{15}$

(B) 5

(C) $\sqrt{10}$

(D) 1

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2. The integral $\int \frac{1}{\sqrt[4]{(x-1)^3(x+2)^5}}\,dx$ is equal to:

(A) $\frac{3}{4}\left(\frac{x+2}{x-1}\right)^{\frac{1}{4}}+C$

(B) $\frac{3}{4}\left(\frac{x+2}{x-1}\right)^{\frac{5}{4}}+C$

(C) $\frac{4}{3}\left(\frac{x-1}{x+2}\right)^{\frac{1}{4}}+C$

(D) $\frac{4}{3}\left(\frac{x-1}{x+2}\right)^{\frac{5}{4}}+C$

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3. Which of the following physical quantities has the same dimensions as surface tension?

(A) Force × Length

(B) Energy / Area

(C) Pressure × Length

(D) Work × Distance

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4. A speed of 54 km/h is equal to:

(A) 10 m/s

(B) 12 m/s

(C) 15 m/s

(D) 20 m/s

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5. The result of $3.456 + 2.1$ with correct significant figures is:

(A) 5.556

(B) 5.56

(C) 5.5

(D) 5.6

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6. The measured value of a quantity is 98 units, while the true value is 100 units. The percentage error is:

(A) 1%

(B) 2%

(C) 3%

(D) 4%

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7. A screw gauge has pitch $= 0.5$ mm and number of divisions on circular scale $= 50$. Find least count.

(A) 0.1 mm

(B) 0.01 mm

(C) 0.001 mm

(D) 0.05 mm

8. A particle moves such that its velocity-time graph is a straight line from 0 m/s at $t = 0$ to 20 m/s at $t = 10$ s. The displacement in 10 s is:

(A) 50 m

(B) 100 m

(C) 200 m

(D) 150 m

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9. The velocity-time graph of a particle is given by $v = 4t$. The acceleration is:

(A) 2 m/s^2

(B) 4 m/s^2

(C) 8 m/s^2

(D) Variable

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10. Two cars move in the same direction with velocities 20 m/s and 30 m/s. The velocity of one car relative to the other is:

(A) 50 m/s

(B) 10 m/s

(C) 25 m/s

(D) 30 m/s

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11. A body starts from rest and accelerates uniformly at 2 m/s^2. The distance covered in 5 s is:

(A) 10 m

(B) 20 m

(C) 25 m

(D) 50 m

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12. A car moving at 20 m/s comes to rest with a uniform retardation of 5 m/s^2. The stopping distance is:

(A) 20 m

(B) 30 m

(C) 40 m

(D) 50 m

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13. A projectile is projected with speed 20 m/s at an angle of 30°. The range is ($g = 10$ m/s^2):

(A) 20 m

(B) 30 m

(C) 40 m

(D) 60 m

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14. Vectors of magnitude 3 and 4 are perpendicular. Resultant?

(A) 5

(B) 7

(C) 1

(D) 12

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15. Boat speed $= 5$ m/s, river speed $= 3$ m/s, width $= 40$ m. Minimum time?

(A) 5 s

(B) 8 s

(C) 10 s

(D) 20 s
