

## JEE Mains 2026 April Exam High-Priority Formula List

### MATHEMATICS

#### Quadratic Equations:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$\text{Sum of roots} = -b/a$$

$$\text{Product of roots} = c/a$$

#### Sequence & Series:

$$\text{AP: } a_n = a + (n-1)d$$

$$S_n = n/2 [2a + (n-1)d]$$

$$\text{GP: } S_n = a(r^n - 1)/(r - 1)$$

#### Limits:

$$\lim_{x \rightarrow 0} (\sin x)/x = 1$$

$$\lim_{x \rightarrow 0} (1 - \cos x)/x^2 = 1/2$$

#### Derivatives:

$$d/dx (x^n) = n x^{n-1}$$

$$d/dx (\sin x) = \cos x$$

$$d/dx (e^x) = e^x$$

#### Integration:

$$\int x^n dx = x^{n+1}/(n+1)$$

$$\int e^x dx = e^x$$

$$\int 1/x dx = \ln|x|$$

#### Coordinate Geometry:

$$\text{Distance} = \sqrt{[(x_2 - x_1)^2 + (y_2 - y_1)^2]}$$

$$\text{Circle: } (x-h)^2 + (y-k)^2 = r^2$$

### PHYSICS

$$v = u + at$$

$$s = ut + (1/2)at^2$$

$$v^2 = u^2 + 2as$$

$$F = ma$$

$$\text{Work} = F s \cos\theta$$

$$\text{KE} = (1/2)mv^2$$

$$PE = mgh$$

**Thermodynamics:**

$$PV = nRT$$

$$\Delta U = Q - W$$

**Electrostatics:**

$$F = k \frac{q_1 q_2}{r^2}$$

$$E = F/q$$

**Current Electricity:**

$$V = IR$$

$$P = VI$$

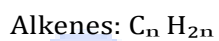
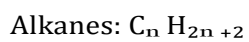
**Modern Physics:**

$$E = mc^2$$

$$E = hv$$

**CHEMISTRY**

$$n = \frac{\text{mass}}{\text{molar mass}}$$



Atomic size decreases across a period Ionization

energy increases across a period

