Gate Assignment CH 31

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1) **Question** : The position $x(t)$ of a particle, at constant ω, is described by the equation

$$\frac{d^2x}{dt^2} = -\omega^2 x.$$

The initial conditions are $x(t = 0) = 1$ and $\left.\frac{dx}{dt}\right|_{t=0} = 0$.

The position of the particle at $t = \frac{3\pi}{\omega}$ is _____ (in integer).   (GATE CH 2023)

Solution: