GATE 2023-BM.54

EE22BTECH11004 - Allu Lohith

1. A system is described by the following differential equation

$$0.01\frac{d^2y(t)}{dt^2} + 0.2\frac{dy(t)}{dt} + y(t) = 6x(t)$$

where time t is in seconds. If $x(t)$ is the unit step input applied at $t = 0$ s to this system, the magnitude of the output at $t = 1$ s is _____. (Round off the answer to two decimal places.)