



SNS COLLEGE OF ENGINEERING

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AN AUTONOMOUS INSTITUTION



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Tutorial

Runge-Kutta method:

1. Given $\frac{dy}{dx} = x^3 + y$, $y(0) = 2$ Compute $y(0.2)$, $y(0.4)$ & $y(0.6)$ by R.K method
2. By R.K method, solve $\frac{dy}{dx} = \frac{y^2 - x^2}{y^2 + x^2}$, $y(0) = 1$ for $x=0.2$ and $x=0.4$ with $h=0.2$.
3. Using R.K method of fourth order find $y(0.1)$ and $y(0.2)$ for the initial value problem $\frac{dy}{dx} = x + y^2$, $y(0) = 1$