



# SNS COLLEGE OF ENGINEERING

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**AN AUTONOMOUS INSTITUTION**



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## Tutorial

### Milne's method

1. Using Milne's method find  $y(4.4)$  given  $5xy' + y^2 - 2 = 0$   $y(4) = 1, y(4.1) = 1.0049,$   
 $y(4.2) = 1.0097, y(4.3) = 1.0143$
2. Using Rungekutta method of 4<sup>th</sup> order, find the value of  $y$  at  $x=0.2, 0.4, 0.6$  given  
 $\frac{dy}{dx} = x^3 + y, y(0) = 2$ . Also find the value of  $y$  at  $x=0.8$  using Milne's predictor and  
corrector method.

### Adams method:

3. Given that  $y' = y - x^2; y(0) = 1; y(0.2) = 1.1218; y(0.4) = 1.4682$  and  $y(0.6) = 1.7379,$   
evaluate  $y(0.8)$  by Adam's method.
4. Find  $y(0.1), y(0.2), y(0.3)$  from  $\frac{dy}{dx} = xy + y^2, y(0) = 1$  by using R.K method and  
hence obtain  $y(0.4)$  using Adam's method.