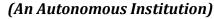


SNS COLLEGE OF TECHNOLOGY





DEPARTMENT OF MATHEMATICS

 $f(x_0, y_0) = x_0 + y_0$ = 0 + 1 = \$; Find y(0.1) by Modified Eulos 27 $y' = y - \frac{2\pi}{4}, y(0) = 1$ Given : $f(x_iy) = y - \frac{2a_i}{y}$ $x_0 = 0 , y_0 = 1 \qquad h = a_i - x_0$ $x_1 = 0 \cdot 1 \qquad y_i = 2 \qquad = 0 - 1 \qquad \mu$ By Modified euler Method. <u>n=0</u> y_i = y_ot hf [aoth/2 yoth/2 f(ao, y_o)] = 1 + 0.1 f [0.05, 1+0.05f(0,1)]= [+0.1f0.05, 1+0.05[1-2x9]]= 1+ 0.1 [1.05 - 2 × 0.05] 1.05] = 1 + 0.1 [1.05 - 0.095]= 1+0.095 = 1.095.17 $[Y_1 = 1.095]$