1. By Taylor's series method find y(0.1) given that $y^{11} = y + xy$; y(0) = 1; $y^{1}(0) = 0$.

2. Solve the system of equations dy/dx $= z - x^2$, dz/dx $= y + x$ with y(0) =1, z(0) =1 by taking h=0.1 , to get y(0.1) and z(0.1) . Here y and z are dependent variable and x is independent.

3. Using Euler's method find y(0.2) and y(0.4) from dy/dx =x+ y , y(0)= 1, with h=0.2.

4. Using modified Euler's method compute y(0.1) with h= 0.1 from $y^{1} = y - (2x/y)$, y(0)=1.

5. Given dy/dx= $x^3 + y$, y(0)=2 . Compute y(0.2) , y(0.4) ,y(0.6) by Runge-Kutta method of Fourth order.

6. Solving the system of differential equation dy/dx = xz + 1; dz/dx = -xy for x = 0.3 using fourth order Runge- Kutta method , the initial values are x=0 , y=0 , z= 1.

7. Determine the value of y(0.4) using Milne's method given $y^{1} = xy + y^2$, y(0)=1 ; Use Taylor series to get the values of y(0.1) ,y(0.2) , y(0.3).

8. Using Runge-Kutta method calculate y(0.1), y(0.2), y(0.3) given that $\dfrac{dy}{dx} - \dfrac{2xy}{1+x^2} = 1$, y(0)= 0. Taking these values as starting values find y(0.4) by milne's method.

9. Find y(0.1) , y(0.2) , y(0.3) from $\dfrac{dy}{dx} = xy + y^2$, y(0) = 1 by using R.K method and hence obtain y(0.4) using Adam's method.