ourdiu.com | Shared by Mahabub Hasan

70_C

Daffodil International University

Quiz-2

ID:

Name:

Time: 30mins Set_A

Q1. Solve the Homogeneous Differential Equation $x\frac{dy}{dx} = y + \sqrt{x^2 + y^2}$

Q2. Solve the Differential Equation $\frac{dy}{dx} + y = cosx$

Q3. The number of active subscribers S(t) to a new video streaming platform increases at a rate proportional to the current number of subscribers. The model is given by: $\frac{dS}{dt} = kS$

If the initial number of subscribers $S_0 = 1500$ and the growth rate k=0.2 per month, calculate the expected number of subscribers after 5 months.