

# Daffodil International University

## Department of CSE

Course Code: MAT211

set: B

Section: 65\_B

Course Title: Engineering Mathematics

Quiz: 01

Time: 30 Mins

01. Give the answer (with explanation) to the following questions 4

a) Mention the order and degree of  $\left(\frac{dy}{dx}\right)^3 = \sqrt[5]{\left(\frac{d^3y}{dy^3}\right)^4 + y}$

b) Write down the conditions of non-Linear equation with example

02. Find the differential equation of the solution  $xy = Ae^{2x} + Be^{-2x} + x^2$  5

03. Solve the equation  $\frac{dy}{dx} = \frac{xy+3x-y-3}{xy-2x+4y-8}$  6

*Handwritten notes:*  
Order - 3  
dgn -  
 $\frac{dy}{dx} = \frac{x-1}{x+9}$   
 $\frac{(y+3)(x-1)}{(y-2)(x+9)} = \frac{dy}{dx}$   
 $x = dy$