Pune Institute of Computer Technology, Pune

Department of Information Technology

Subject : Engineering Mathematics – III

Assignment No. – 01

Unit - I : Linear Differential Equations

Issue Date : 12/02/2020   Submission Date : 18/02/2020

Submission Platform – Microsoft Teams

Instructions : 1)Assignment should be submitted in **pdf format** with file size

Not exceeding 5mb and must be scanned properly(readable).

2)Assignment to be written in question answer format only.

3)Five digit roll number should be mentioned on each page.

4)Deadline should be followed strictly.

1) $(D^2 - 3D + 2)y = \dfrac{1}{e^{e^{-x}}} + \cos e^{-x}$

2) $(D^2 + 1)y = tanx$

3) $\dfrac{d^2y}{dx^2} - 4\dfrac{dy}{dx} + 4y = x\, e^{2x} \sin 3x$

4) $(2x + 3)^2 \dfrac{d^2y}{dx^2} - 2(2x + 3)\dfrac{dy}{dx} - 12y = 6x$

5) $\dfrac{dx}{2x} = \dfrac{dy}{-y} = \dfrac{dz}{4xy^2 - 2z}$

6) $\dfrac{dx}{dt} + 5x - 2y = t, \qquad \dfrac{dy}{dt} + 2x + y = 0$