

KHATRA @ ADIBASI MAHAVIDYALA
INTERNAL ASSESSMENT 4th SEM 2020

SUB: MATH (PROG/GE)

PAPER: SH/MTH/404/GE-4

F.M - 10

1. Answer only one question:

2x1 = 2

(a) Solve, $(D^2+4)(D^2+1)y = 0$

(b) Evaluate, $\frac{1}{(D^2-1)} \cdot xe^x$

2. Answer only two question:

4x2 = 8

(a) Solve, $\frac{d^3y}{dx^3} + 3\frac{d^2y}{dx^2} + 2\frac{dy}{dx} = x^2$

(b) Solve, $(D^2+1)y = \sin 3x - \cos \frac{x}{2}$

(c) Solve, $(x^2D^2 - 3xD + 5)y = x^2 \sin(\log x)$, where $D \equiv \frac{d}{dx}$

(d) Solve, $x^2 \frac{d^2y}{dx^2} + 2x \frac{dy}{dx} - 20y = (x+1)^2$