

J.C Bose University of Science & Technology, YMCA Faridabad
B.Tech. (ECE, ENC, EEIOT)-2nd Semester,
Sessional - I (July.- 2022)

Subject Name: Calculus, Ordinary Differential Equation and Complex Variable
Subject Code: BSC106D(Mathematics-II)

Time :90 minutes

M.M:15 Marks

Note: Attempt all questions .

Each Question carry equal marks.

Que.1 Solve $y(2xy+1)dx + x(1+2xy - x^3y^3)dy = 0$. (CO-2)

Que.2 Solve $x(dy/dx) + y = x^3y^6$ (Bernoulli's equation). (CO-2)

Que.3 Solve $x = y + p^2$ (solvable for x). (CO-2)

Que.4 Find the complete solution of $(D^3+2D^2+D)y = e^{-x} + \sin 2x$. (CO-1)

Que.5 Solve $(x^2D^2 - xD - 3)y = x^2 \log x$. (CO-1)