Math-202 Semester-133 QUIZ II

NAME: S.No. ID:

Maximum Marks: 15 Section:06 Time Allowed: 25 minutes

(1) Solve the DE: $x\frac{dy}{dx} = 2xe^x - y + 6x^2$.

(2)Find the integrating factor that makes the differential equation

$$y(\ln x - \ln y)dx - (x\ln x - x\ln y - y)dy = 0 \quad \text{exact.}$$

(3) Convert the differential equation into linear differential equation

$$x^2\frac{dy}{dx} + 2xy = 5y^3.$$