Math-202 Semester-122 QUIZ I

NAME: S.No. ID:

Maximum Marks: 15 Section:04 Time Allowed: 45 minutes

(1) Verify that $y = xcos(x) - sin(x)ln(sin(x))$ is a solution of $y'' + y = -cosec(x)$.

(2) Determine a region in which differential equation $y' = \sqrt{\frac{y^2-9}{x-3}}$ has a unique solution through the point (x_0, y_0).

(3) Solve the differential equation $y^2e^{3x}dy = dx + y^2dy$