NAME: S.No.   ID:

Maximum Marks: 10   Section:07   Time Allowed: 30 minutes

(1) Verify that $y_1 = x^2\, cos(ln\ x)$ is a solution of the differential equation $x^2\, y'' - 3x\, y' + 5y = 0$. Use reduction of order to find a second solution. Also, form the general solution and fundamental set of solutions.