

The LNM Institute of Information Technology

Math-I, Quiz-I: Section-B

Time: 20Minutes

Maximum Marks: 10

- **Problem 2.** Reduce the following differential equation into an equivalent system of first order equations

$$y'' - \sin xy' + \cos xy = 0.$$

- **Problem 1.** Find the radius of convergence of the power series

$$\sum_{m=3}^{\infty} \frac{(m+2)^2}{(m-2)^4} x^m.$$