Internal Assessment for UG Mathematics (GE)-2022 Department of Mathematics(UG & PG)

Ramananda College Semester ii

F.M. 10

TIME 30 MINUTES

Paper Code: SH/MTH/203/GE-2 (Real Analysis)

Answers any Two

- 1. Show that every convergent sequence is bounded. Is the converse is true? Justify your answer.
- 2. State and prove Bolzano weierstrass theorem for sequence.
- 3. a. Test the convergence of the series

b. Examine the convergence of the series

$$x + \frac{x^2}{2} + \frac{x^3}{3} + \dots \dots x > 0$$
 3

4. Discuss Limit point, Completeness Property, Derived set, Heine Borel theorems and Order properties of Real number.

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