M.Sc. DEGREE EXAMINATION,ODD SEMESTER 2020
II Year III Semester
Complex Analysis

Max.marks :25

Answer any **FIVE** questions $(5 \times 5 = 25)$ Marks

1. State and prove Liouvilles theorem.
2. Let G be a region in C and f an analytic on G. Suppose there is a constant M such that $lim_{z \to a} sup\,|f(z)| \leq M$ for all a in G Prove that $|f(z)| \leq M$ for all z in G.
3. Let Re $Z_n \geq -1$ then prove that the series $\sum log(1 + Z_n)$ converges absolutely iff the $\sum Z_n$ converges absolutely.
4. State and prove mean value theorem.
5. State and prove little Picard theorem.
6. State and prove Moreras theorem.
7. State prove Eulers theorem of sequence of prime numbers.