Session: 2023 - 2024

Name of the Teacher: Dr. MONIA
Class and Section: B.Sc.II(Semester-IV)
Subject: Mathematics
Paper: Sequence and Series

JANUARY
Week 3   **Chapter:** Boundedness of the set of real numbers, least upper bound, greatest lower bound of a set neighbourhoods, interior points.
Week 4   **Chapter:** Limit point, Derived set, Adherent point, Closure of a set, Examples and Theorems
Week 5   **Chapter:** Compact Sets and Heine-Borel Theorem

FEBRUARY
Week 1   **Chapter:** Real Sequences and their convergence, Theorems on limit of sequence, Bounded and monotonic sequences,
Week 2   **Chapter:** Cauchy's sequence, Cauchy general Principle of convergence, subsequences, subsequential limits.
Week 3   **Chapter:** Convergence and divergence of Infinite series
Week 4   **Chapter:** Test for convergence of infinite series

MARCH
Week 1   **Chapter:** Examples
Week 2   **Chapter:** Leibnitz's test for convergence of alternating series
Assignments:
Week 3   **Chapter:** Absolute convergence

Week 4 **Chapter:** Abel's test, Dirichlet's test
Week 5, **Chapter: Vacations (Holi)**

APRIL
Week 1 **Chapter:** Removal of parenthesis, examples
Week 2 **Chapter:** Conditionally convergent Series
Week 3 **Chapter:** Rearrangements of Series, examples
Quiz:
Week 4 **Chapter:** Cauchy product of the series, Convergence of infinite product, Convergence by p-test, Absolute convergence of infinite product
Week 5 **Chapter: Test**