Course: SEC
Mathematics Practical using 'C' Language

Semester: I	Credits: 2	Subject Code: BSSECCSM12301	Lectures: 60

Course Outcomes:

At the end of this course, the learner will be able to:

- CO1-Construct a solid foundation in the field of programming handling various mathematical problems from vector geometry using 'C' Programming.
- CO2-Critically analyze a given problem, understand and solve the problem using C.
- CO3-Find and explain the concepts of GCD, LCM and remainder using Fermat's theorem and apply those in C programming.
- CO4-Understand the use of various concepts such as arrays in C Programming for mathematical problems.

Unit 1: C- Program	30

- Sorting of points w.r.t an oblique line in the plane.
- Intersection of two-line segments.
- Sorting of points w.r.t a convex polygon.
- Intersection of a line segment with a convex polygon.
- Sorting of points w.r.t rectangle whose sides are parallel to coordinate axes.
- Sorting of points w.r.t. parallelepiped whose sides are parallel to the co-ordinate axes.co-ordinate axes.

Unit 2: C- Programs	30

- Area of convex polygon.
- To find the pair of points which are nearest apart.
- To find the pair of points which are farthest apart.
- To find the nearest neighborhood of every point in the given set of points.
- Find remainder problem based on Fermat's Theorem.
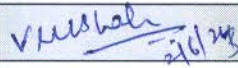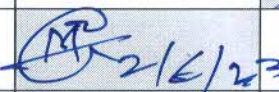- Find GCD and LCM of two numbers using Euclidean Algorithm.

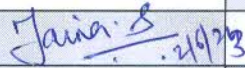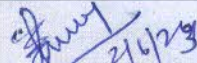### Websites:

- https://nptel.ac.in
- https://swayam.gov.in
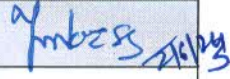
Recommended Text Books:
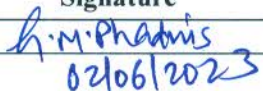
- Yashwant Kanetkar, *Let Us*, BPB Publications, 15th Edition.

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