

Discipline: Math & Sci.	Semester: 2 ND	Name of the Teaching faculty: Jitendra Kumar Malik, Lecturer in Mathematics
Sub: Engineering Mathematics-II	No of Days/weeks-06 Total Class allotted-75	
Week	Class Day	Theory Topics.
1 st	1 st	Introduction & examples of vectors
	2 nd	Types of vectors
	3 rd	Representation of vectors, magnitude and direction of vectors, position on vector
	4 th	Addition and subtraction of vectors.
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
2 nd	1 st	Dot product and Cross product of two vectors & their properties.
	2 nd	Problems
	3 rd	Scalar & vector projection of two vectors, Area of a triangle and parallelogram.
	4 th	Angle between two vectors, related problems
	5 th	problems
	6 th	Discussion of Probable questions and answers.
3 rd	1 st	Definition of sets , Cartesian products, examples
	2 nd	Definition of relation and functions.
	3 rd	Types of functions
	4 th	Introduction to limit & some basis examples of limit.
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
4th	1 st	Various method to finding limit
	2 nd	Problems
	3 rd	Problems
	4 th	Definition of continuity & some appropriate examples
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
5th	1 st	Definition of differentiation, differentiation at a point
	2 nd	1 st principle methods
	3 rd	Problems
	4 th	Basic formulae for differentiation, Algebra of derivatives,
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
6 th	1 st	problems
	2 nd	Differentiation of composite functions (Chain rule)
	3 rd	Problems
	4 th	Problems
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
7th	1 st	Various method to find the derivative of a functions 1. Parametric function
	2 nd	Problems
	3 rd	2.Implicit functions
	4 th	Problems
	5 th	3. A function w.r.t another function
	6 th	Discussion of Probable questions and answers.

8 th	1 st	Problems
	2 nd	Successive differentiation (up to 2 nd order)
	3 rd	Problems
	4 th	Partial differentiation
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
9 th	1 st	Definitions of integrations and some basic formulae
	2 nd	Integration of standard functions
	3 rd	Integration by substitution methods
	4 th	Problems
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
10 th	1 st	Integration by parts
	2 nd	Problems
	3 rd	Problems
	4 th	Problems
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
11 th	1 st	Definite integration & their properties
	2 nd	Problems
	3 rd	Problems
	4 th	Application of integrations
	5 th	problems
	6 th	Discussion of Probable questions and answers.
12 th	1 st	Definition, order and degree of differential equations
	2 nd	Solution of differential equation by variable separable method
	3 rd	Solution of Linear differential equation with constant coefficient
	4 th	Problems
	5 th	Problems
	6 th	Discussion of Probable questions and answers.
13 th	1 st	Discussion of Probable questions and answers.
	2 nd	Discussion of Probable questions and answers.
	3 rd	Discussion of Probable questions and answers.
	4 th	Discussion of Probable questions and answers.
	5 th	Discussion of Probable questions and answers.
	6 th	Discussion of Probable questions and answers.