

Discipline: Math & Sci.	Semester: 2 <sup>nd</sup> , 2020-21	Name of the Teaching faculty: Jitendra Kumar Malik, Lecturer Mathematics
Sub: Engineering Mathematics-II	No of Days/weeks-06 Total Class allotted-75	Semester from date: 19-04-2021 to 10-07-2021 No. of weeks:13
Week	Class Day	Theory Topics.
1 st	1 <sup>st</sup>	Introduction & examples of vectors
	2 <sup>nd</sup>	Types of vectors
	3 <sup>rd</sup>	Representation of vectors, magnitude and direction of vectors, position on vector
	4 <sup>th</sup>	Addition and subtraction of vectors.
	5 <sup>th</sup>	Problems
	6 <sup>th</sup>	Discussion of Probable questions and answers.
2 nd	1 <sup>st</sup>	Dot product and Cross product of two vectors & their properties.
	2 <sup>nd</sup>	Problems
	3 <sup>rd</sup>	Scalar & vector projection of two vectors, Area of a triangle and parallelogram.
	4 <sup>th</sup>	Angle between two vectors, related problems
	5 <sup>th</sup>	problems
	6 <sup>th</sup>	Discussion of Probable questions and answers.
3 rd	1 <sup>st</sup>	Definition of sets, Cartesian products, examples
	2 <sup>nd</sup>	Definition of relation and functions.
	3 <sup>rd</sup>	Types of functions
	4 <sup>th</sup>	Introduction to limit & some basis examples of limit.
	5 <sup>th</sup>	Problems
	6 <sup>th</sup>	Discussion of Probable questions and answers.
4th	1 <sup>st</sup>	Various method to finding limit
	2 <sup>nd</sup>	Problems
	3 <sup>rd</sup>	Problems
	4 <sup>th</sup>	Definition of continuity & some appropriate examples
	5 <sup>th</sup>	Problems
	6 <sup>th</sup>	Discussion of Probable questions and answers.
5th	1 <sup>st</sup>	Definition of differentiation, differentiation at a point
	2 <sup>nd</sup>	1 <sup>st</sup> principle methods
	3 <sup>rd</sup>	Problems
	4 <sup>th</sup>	Basic formulae for differentiation, Algebra of derivatives,
	5 <sup>th</sup>	Problems
	6 <sup>th</sup>	Discussion of Probable questions and answers.
6 th	1 <sup>st</sup>	problems
	2 <sup>nd</sup>	Differentiation of composite functions (Chain rule)
	3 <sup>rd</sup>	Problems
	4 <sup>th</sup>	Problems
	5 <sup>th</sup>	Problems
	6 <sup>th</sup>	Discussion of Probable questions and answers.
7th	1 <sup>st</sup>	Various method to find the derivative of a functions 1. Parametric function
	2 <sup>nd</sup>	Problems
	3 <sup>rd</sup>	2.Implicit functions
	4 <sup>th</sup>	Problems

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