

Veer Surendra sai University of Technology ,Burla

Semester-iv

Sub: Mathematical methods

Session-2016-17

Name-Itishree Nayak

Period	Module/Number	Topic Covered	Remark
1	I	Laplace Transform, Definition and Properties	
2	I	LT of some elementary function	
3	I	Convolution Theorem	
4	I	Inverse Transformation	
5	I	Application	
6	I	Fourier Transformation, Definition	
7	I	Properties, FT of some elementary function	
8	I	Convolution	
9	I	FT as a limit of Fourier Series	
10	I	Application to PDE	
11	II	Volterra Integral equation-basic concept	
12	II	Relationship between linear diff equation and Volterra Int equ.	
13	II	Resolvent Kernel	
14	II	Solution by resolvent Kernel	
15	II	The method of successive approx.	
16	II	Continuing	
17	II	Convolution type equation	
18	II	Continuing	
19	II	Sol. Of Int.diff. equ with aid Laplace Transformation	
20	II	Continuing	
21	III	Fredholm Int. equation	
22	III	Iterated Kernel	
23	III	Construction of resolvent Kernel with aid of iterated Kernel	
24	III	Int. equ. With degenerate Kernel	
25	III	Characteristic number and eigen function	
26	III	Continuing	
27	III	Sol of homogeneous equation with degenerate Kernel	
28	III	Continuing	
29	III	Non-homogeneous symmetric equation	
30	III	Fredholm alternatives	
31	IV	The variation of functional and its properties	
32	IV	Euler's equation	
33	IV	Continuing	

34	IV	Field of Extremals	
35	IV	Sufficient condition for the Extremum	
36	IV	Moving boundary problems	
37	IV	Discontinuous problems	
38	IV	One sided variations	
39	IV	Ritz method	
40	IV	Continuing	