

Bhoj Reddy Engineering College for Women: Hyderabad

Faculty of Mathematics

Lesson plan of faculty member for the academic year 2017–18

Class: I B Tech

Branch - Section: **ECE-B**

Semester: II

Subject: Mathematics-II

Lectures per week: 4+1 (Tutorial)

Lecture Number	Topics to be covered	Date (s)
UNIT-I: Laplace Transforms		
1	Definition of integral transform, Laplace Transform, Existence of Laplace Transform	19 December 2017
2	Tutorial :Problems on Laplace Transform of Standard functions	19 December 2017
3	Laplace Transform of Standard functions Problems	20 December 2017
4	Change of Scale Property & First Shifting theorem and problems	22 December 2017
5	Second shifting theorem & $L[t^n f(t)]$ and problems	23 December 2017
6	$L[t^{-1}f(t)]$, Laplace Transform of Integral of $f(t)$ and Problems	27 December 2017
7	Evaluation of Integrals by Laplace Transform	29 December 2017
8	Unit step function and its Laplace Transform, problems	30 December 2017
9	Dirac's delta function and its Laplace Transform, problems	2 January 2018
10	Tutorial :Laplace Transform of Periodic function and its Problems	2 January 2018
11	Inverse Laplace transforms of standard functions	3 January 2018
12	Problems of Inverse Laplace transforms	5 January 2018
13	Problems of Inverse Laplace Transforms	6 January 2018
14	Properties of Inverse Laplace transforms	9 January 2018
15	Tutorial:Problems of Inverse Laplace transforms using Properties	9 January 2018
16	Convolution theorem and its problems	10 January 2018
17	Problems on Convolution theorem	12 January 2018
18	Solving ordinary differential equations by Laplace Transforms	13 January 2018
19	Problems of O D E by Laplace Transforms	16 January 2018
20	Tutorial : Problems of O D E	16 January 2018
UNIT-II: Beta and Gamma Functions		
21	Gamma function and its other forms, Properties of Gamma function	17 January 2018
22	Beta function and its properties, Other forms of Beta function	19 January 2018
23	Problems on Beta function	20 January 2018
24	Relation between Gamma and Beta function	23 January 2018
25	Tutorial : Problems on Gamma function	23 January 2018
26	Evaluation of integrals by Gamma and Beta functions	24 January 2018
27	Problems related to Gamma and Beta function	27 January 2018
UNIT-III: Multiple Integrals		
28	Multiple Integrals – double integrals	30 January 2018
29	Tutorial : Problems on double integrals	30 January 2018
30	Problems on Gamma and Beta function	31 January 2018
31	Change of order of integration and its problems	2 February 2018
32	Change of variables (polar) and its problems	3 February 2018
33	Tutorial :Evaluation of triple integrals and problems	6 February 2018

34	Change of variables into polar form (cylindrical & spherical) and its problems	6 February 2018
35	Finding area of a region using double integration and its problems	7 February 2018
36	Problems on areas by double integration	9 February 2018
37	Finding volumes using triple integration and its problems	10 February 2018
38	Finding Center of gravity using Gamma and Beta functions	14 February 2018
39	Problems on double & triple integrals	16 February 2018
UNIT-IV: Vector Differentiation		
40	Introduction, Scalar point function, Vector point function	17 February 2018
41	Vector Differential Operator, Gradient of a Scalar point function and problems	20 February 2018
42	Tutorial :Divergence of a Vector point function and problems	20 February 2018
43	Curl of a Vector point function and problems	21 February 2018
44	Laplacian operator and problems	23 February 2018
45	Vector Identities(repeated application of del)	24 February 2018
46	Vector Identities(product of two point functions)	27 February 2018
47	Tutorial:Problems on Gradient of a Scalar point function	27 February 2018
48	Problems on vector identities	28 February 2018
49	Problems on vector identities	2 March 2018
UNIT-V: Vector Integration		
50	Line integral, Problems on Line integral	3 March 2018
51	Problems on Line integral	6 March 2018
52	Tutorial :Work done by Line integral	6 March 2018
53	Scalar Potential Function by Line Integral	7 March 2018
54	Surface Integral, Problems on Surface Integral	9 March 2018
55	Volume Integral, Problems on Volume Integral	13 March 2018
56	Tutorial :Examples	13 March 2018
57	Green's theorem and problems	14 March 2018
58	Problems on Green's theorem	16 March 2018
59	Gauss Divergence theorem and problems	17 March 2018
60	Stokes theorem and problems	20 March 2018
61	Tutorial :Examples	20 March 2018
62	Problems on Gauss Divergence theorem	21 March 2018
63	Examples of theorems	23 March 2018
64	Revision of unit 1	24 March 2018
65	Revision of unit 2	27 March 2018
66	Tutorial :Revision of unit 3	27 March 2018
67	Revision of unit 4	28 March 2018
68	Revision of unit 5	31 March 2018
69	Revision	3 April 2018
70	Revision	3 April 2018

Text books:

1. Higher Engineering Mathematics by Dr.B.S.Grewal by Khanna Publishers
2. Advanced Engineering Mathematics by R.K.Jain & S.R.K.Iyengar,Narosa Publishers

Name and signature of the faculty: Swapna G

Name and signature of Head of the Department: Padma K