

DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: Robotics & Automation

Academic Session: 2020-21 (May-August 2021)

Subject with code: BSC-MATH-102G

Name of Faculty with designation : Dr. ASHOK KUMAR (Associate Professor)

L.No.	Month	Date & Day	Sem-Class	Unit	Topic/Chapter covered
1	May	3rd Week	II- R&A	I	Multiple Integration: Double integrals (Cartesian)
2	May	3th Week	II- R&A	I	Change of order of integration in double integrals
3	May	3th Week	II- R&A	I	Change of variables (Cartesian to polar)
4	May	3th Week	II- R&A	I	Applications: areas and volumes,
5	May	4th Week	II- R&A	I	Centre of mass and Gravity (constant and variable densities)
6	May	4th Week	II- R&A	I	Triple integrals (Cartesian), Orthogonal curvilinear coordinates
7	May	4th Week	II- R&A	I	Simple applications involving cubes, sphere and rectangular parallelepipeds
8	May	4th Week	II- R&A	I	Scalar line integrals, Vector line integrals
9	June	1st Week	II- R&A	I	Scalar surface integrals, Vector surface integrals

10	June	1st Week	II- R&A	I	Theorems of Green, Gauss and Stokes
11	June	1st Week	II- R&A	II	Exact, Linear and Bernoulli's equations, Euler's equations
12	June	1st Week	II- R&A	II	Equations not of first degree: equations solvable for p, equations solvable for y, equations solvable for x and Clairaut's type
13	June	2nd Week	II- R&A	II	Second order linear differential equations with variable coefficients
14	June	2nd Week	II- R&A	II	Method of variation of parameters, Cauchy-Euler equation
15	June	2nd Week	II- R&A	II	Discussed Problems of unit-I
	June	3rd Week	FIRST SESSIONAL EXAMINATION		
16	June	4th Week	II- R&A	II	Discussed Question Paper of 1st Sessional Examination
17	June	4th Week	II- R&A	II	Power series solutions, Legendre polynomials
18	June	4th Week	II- R&A	II	Bessel functions of the first kind and their properties.
19	June	4th Week	II- R&A	II	Discussed Problems of unit-II
20	July	1st Week	II- R&A	III	Differentiation, Cauchy-Riemann equations, Analytic functions
21	July	1st Week	II- R&A	III	Differentiation, Cauchy-Riemann equations, Analytic functions
22	July	1st Week	II- R&A	III	Harmonic functions, Finding harmonic conjugate
23	July	1st Week	II- R&A	III	Elementary analytic functions (exponential, trigonometric, logarithm) and their properties

24	July	2nd Week	II- R&A	III	Elementary analytic functions (exponential, trigonometric, logarithm) and their properties
25	July	2nd Week	II- R&A	III	Conformal mappings
26	July	2nd Week	II- R&A	III	Mobius transformations and their properties
27	July	2nd Week	II- R&A	IV	Contour integrals, Cauchy-Goursat theorem (without proof)
28	July	3rd Week	II- R&A	IV	Cauchy Integral formula (without proof)
29	July	3rd Week	II- R&A	IV	Liouville's theorem and Maximum-Modulus theorem (without proof)
30	July	3rd Week	II- R&A	IV	Taylor's series, Zeros of analytic functions, Singularities
31	July	3rd Week	II- R&A	IV	Laurent's series
32	July	4th Week	II- R&A	IV	Residues, Cauchy Residue theorem (without proof)
33	July	4th Week	II- R&A	IV	Evaluation of definite integral involving sine and cosine
34	July	4th Week	II- R&A	IV	Evaluation of certain improper integrals using the Bromwich contour
	July	4/5th Week	2nd SESSIONAL EXAMINATION		