DRONACHARYA COLLEGE OF ENGINEERING

KHENTAWAS, FARRUKHNAGAR, GURGAON, HR

Department: ME

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	Lecture wise Assignment Questions
1	**May**	**3rd Week**	**II- ME**	I	Multiple Integration: Double integrals (Cartesian)	
2	**May**	**3th Week**	**II- ME**	I	Change of order of integration in double integrals	
3	**May**	**3th Week**	**II- ME**	I	Change of variables (Cartesian to polar)	
4	**May**	**3th Week**	**II- ME**	I	Applications: areas and volumes,	
5	**May**	**4th Week**	**II- ME**	I	Centre of mass and Gravity (constant and variable densities)	
6	**May**	**4th Week**	**II- ME**	I	Triple integrals (Cartesian), Orthogonal curvilinear coordinates	
7	**May**	**4th Week**	**II- ME**	I	Simple applications involving cubes, sphere and rectangular parallelepipeds	
8	**May**	**4th Week**	**II- ME**	I	Scalar line integrals, Vector line integrals	
9	**June**	**1st Week**	**II- ME**	I	Scalar surface integrals, Vector surface integrals	
10	**June**	**1st Week**	**II- ME**	I	Theorems of Green, Gauss and Stokes	
11	**June**	**1st Week**	**II- ME**	II	Exact, Linear and Bernoulli's equations, Euler's equations	
12	**June**	**1st Week**	**II- ME**	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- ME**	II	Second order linear differential equations with variable coefficients	

14	**June**	**2nd Week**	**II- ME**	II	Method of variation of parameters, Cauchy-Euler equation	
15	**June**	**2nd Week**	**II- ME**	II	Discussed Problems of unit-I	
	June	**3rd Week**		FIRST SESSIONAL EXAMINATION		
16	**June**	**4th Week**	**II- ME**	II	Discussed Question Paper of 1st Sessional Examination	
17	**June**	**4th Week**	**II- ME**	II	Power series solutions, Legendre polynomials	
18	**June**	**4th Week**	**II- ME**	II	Bessel functions of the first kind and their properties.	
19	**June**	**4th Week**	**II- ME**	II	Discussed Problems of unit-II	
20	**July**	**1st Week**	**II- ME**	III	Differentiation, Cauchy-Riemann equations, Analytic functions	
21	**July**	**1st Week**	**II- ME**	III	Differentiation, Cauchy-Riemann equations, Analytic functions	
22	**July**	**1st Week**	**II- ME**	III	Harmonic functions, Finding harmonic conjugate	
23	**July**	**1st Week**	**II- ME**	III	Elementary analytic functions (exponential, trigonometric, logarithm) and their properties	
24	**July**	**2nd Week**	**II- ME**	III	Elementary analytic functions (exponential, trigonometric, logarithm) and their properties	
25	**July**	**2nd Week**	**II- ME**	III	Conformal mappings	
26	**July**	**2nd Week**	**II- ME**	III	Mobius transformations and their properties	
27	**July**	**2nd Week**	**II- ME**	IV	Contour integrals, Cauchy-Goursat theorem (without proof)	
28	**July**	**3rd Week**	**II- ME**	IV	Cauchy Integral formula (without proof	
29	**July**	**3rd Week**	**II- ME**	IV	Liouville's theorem and Maximum-Modulus theorem (without proof	
30	**July**	**3rd Week**	**II- ME**	IV	Taylor's series, Zeros of analytic functions, Singularities	
31	**July**	**3rd Week**	**II- ME**	IV	Laurent's series	

32	**July**	**4th Week**	**II- ME**	IV	Residues, Cauchy Residue theorem (without proof)	
33	**July**	**4th Week**	**II- ME**	IV	Evaluation of definite integral involving sine and cosine	
34	**July**	**4th Week**	**II- ME**	IV	Evaluation of certain improper integrals using the Bromwich contour	
	July	**4/5th Week**		2nd SESSIONAL EXAMINATION		