Mathematics-2 (15B11MA211)

Convergence of sequences and series, second order linear differential equations, solution in series, Bessel and Legendre functions, partial differential equations, one dimensional wave and heat conduction equations, functions of a complex variable, analytic functions, Cauchy-Riemann equations, conformal mapping, poles and singularities, complex integration, Taylor's and Laurent's series, Cauchy residue theorem and applications, bilinear transformation.

Course Description

Course Code	15B11MA211	**Semester** Even	**Semester** II **Session** 2019-2020 **Month from** Jan 2020- June 2020	
Course Name	Mathematics 2			
Credits	4	**Contact Hours**	3-1-0	
Faculty (Names)	**Coordinator(s)**			
	Teacher(s) (Alphabetically)			

COURSE OUTCOMES		COGNITIVE LEVELS
After pursuing the above mentioned course, the students will be able to:		
C106.1	apply different methods for solving ordinary differential equations of second order.	Applying Level (C3)
C106.2	explain different tests/methods of convergence for infinite series.	Understanding Level (C2)
C106.3	find the series solution of differential equations and use it to construct Legendre's polynomials and Bessel's functions.	Applying Level (C3)
C106.4	classify the partial differential equations and apply Fourier series to find their solution.	Applying Level (C3)
C106.5	explain Taylor's & Laurent's series expansion, singularities, residues and transformations.	Understanding Level (C2)
C106.6	apply the concept of complex variables to solve the problems of complex differentiation and integrations	Applying Level (C3)