عدد الساعات: 2 نظري+ 1 مناقشة	المادة: الرياضيات

6 وحدات   عدد الساعات: 2 نظري+ 1 مناقشة   المادة: الرياضيات

عدد الساعات	مفردات المادة
	CH 1- Infinite series 1- Finite and infinite sequence. 2- Finite and infinite series. 3- Convergence of series, comparison tests, integral test, ratio test. 4- Estimation of the sum of series of constant terms.
	CH 2- Power series expansion of function 1- Introduction. 2- Taylor series expansion and remainder term. 3- Convergence of power series. 4- Computation of logarithms. 5- Computation of trigonometric function. 6- Computation of other function.

	CH 3- Vectors
	1- Vector component and the unit vector(i and j).
	2- Addition and subtraction of vectors.
	3- Space coordinates.
	  I- Cartesian coordinates.
	  II- Cylindrical coordinates.
	  III- Spherical coordinates.
	4- Scalar product of two vectors.
	5- Vector product of two vectors.
	6- Equation of line and planes.

	CH 4- Partial differentiation 1- Function of two or more variables. 2- Directional derivatives and gradient. 3- Divergence and curl. 4- The chain rule for partial derivatives. 5- The total differential. 6- Maxima and minima of functions of two independent variables. 7- Higher order derivatives. 8- Exact differentials. 9- Derivatives of integrals.
	CH 5- First order differential equation 1- Introduction. 2- Equation with variables separable.

	3- Homogenous equation.
	4- Nonhomogenous equation.
	5- Linear equation.
	6- Equation with exact differentials.
	CH 6- Second order differential equation
	1- Introduction.
	2- Special type of second order equation.
	3- Homogenous linear equation.
	4- Nonhomogenous linear equation.
	5- Differential operators.
	6- Solution of Laplace equation Vsing.
	7- Separation of variables method.

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