

**P. N. Das College**  
**Academic Calendar**  
**2018-2019**

Department of Mathematics							
Subject: MTMG							
Month: <b>July 2018-October 2018</b>				<b>Year-2018-2019</b>			
Sl No	Hons/ Gen	Paper	Group	Topic	No. of Lecture	Name of the Lecture	Remarks
1.	<b>Gen 1<sup>st</sup> Sem</b>			Differential Calculus			
<b>Limit, Continuity and Differentiation</b>					5	Concept of Limit	
					2	Problems-Solutions	
					1	Class test	
					6	Continuity and discontinuity	
					3	Problems- Solutions	
						Class test	
					6	Differentiation	
					2	Problems-Solutions	
					1	Successive Differentiation	
					2	Leibnitz Theorem and its application	
					1	Problem Solutions	
					1	Class test	
					4	Partial Differentiations	
					2	Euler's Theorem	
					3	Problem Solutions	
1	Class test						
<b>Applications</b>					2	Tangents and Normals	
					2	Problems-Solutions	
					1	Curvatures	
					2	Problems-Solutions	
					2	Asymptotes	
					2	Problems-Solutions	
					1	Singular Points	
					2	Problems-Solutions	
					5	Tracing of curves	
					3	Tracing of curves	
					1	Class Test	
<b>Mean Value Theorem</b>					1	Role's Theorem	
					1	Problems-Solutions	
					5	Mean Value Theorem	
					3	Problems-Solutions	
					2	Taylor's Theorem	
<b>Mean Value Theorem</b>					1	Maclaurin's Theorem	
					3	Maclaurin's Series	
					2	Problems-Solutions	
					4	Maximum and Minimum	
					2	Problems-Solutions	

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2.	PART-II	II	A	Modern Algebra	1	Set Theory			
					2	Relation and Mappings			
					5	Group Theory			
					2	Rings and Fields			
			B	Geometry	2	Rectangular Cartesian Co-ordinate			
					1	Equation of Plane			
			C	Differential Calculus	3	Sequence of Real numbers			
					3	Series of real numbers			
			D	Integral Calculus	2	Improper integral			
			E	Differential Equation	5	Second order linear differential Equation			
					1	Orthogonal Trajectory			
			A	Modern Algebra	3	Eigen values and Eigen vectors			
			B	Geometry	3	Sphere and its tangent plane			
					2	Right circular cone			
					C	Differential Calculus	2	Maximum and Minimum	
							3	Application of differential calculus	
3.	PART-II	III	A	Numerical Method	1	Approximation of Numbers and Numerical Operator			
					3	Interpolation			
			B	L. P. P	1	Basic concepts of LPP			
					3	Sets of Feasible solutions			
			C	Dynamics	2	Motion in a plane			
					2	Concept of force: Work. Power. Energy			

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			D	Probability and Statistics	2	Elements of Probability Theory	
					3	Probability Distribution	
					3	Statistical Methods	
			E	Calculus of variation	3	Difference Equation	
			C	Dynamics	2	Central Orbit	
					1	Kepler's law of motion	
					3	Motion under inverse square law	
			E	Probability and Statistics	2	Time Series	
					2	Index Number	
4.	PART-III	IV	A	Boolean Algebra	4	Basic concept of Boolean Algebra and truth tables	
					2	Problem solution	
					5	Laws of Boolean Algebra and Logic gates	
					2	Problem solution	
			B	Calculus	3	Concept of convergence and Uniform convergence: Sequence of functions	
					1	Problem solution	
					3	Series of function	
					2	Power series	
					1	Problem solution	
			C	Discrete Mathematics	8	Integers	
			A	Boolean Algebra	4	Application to Simple Problem: MS Office, Internet, Email	
			B	Calculus	8	Laplace Transformation and its Application	
					4	Partial Differential Equation	
			C	Discrete Mathematics	5	Recurrence relation and Generating function	

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Month: Nov 2018-Feb 2019 For part II& III Jan 2019-Feb 2019 for 2 <sup>nd</sup> Semester						Year-2018-2019	
Sl No	Hons /Gen	Paper	Group	Topic	No. of Lecture	Name of the Lecture	Remarks
1.	Gen 2 <sup>nd</sup> Sem			Differential Equation			
					2	Concept of differential	

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						equations (General form, Order Degree, Formation of Differential Equation)	
					2	Problems-Solutions	
					6	Exact Differential Equation	
					4	Problems-Solutions	
					1	Class Test	
					6	First Order Linear Differential Equn	
					4	Problems-Solutions	
					4	First order higher degree equn	
					4	Problems Solutions	
					1	Class test	
					2	Higher Order Differential equn, Basic concept	
					2	Problems-Solutions	
					5	Linear homogeneous equation with constant coefficient- General method	
					5	Problem Solutions	
					1	Variation of Parameter	
					2	Problems-Solutions	
					1	Cauchy Euler equation	
					2	Problems-Solutions	
					1	Class Test	
					2	Simultaneous equation	
					3	Problems-Solutions	
					1	Total Differential Equation	
					1	Problems-Solutions	
					1	Class Test	
					2	Concept of Partial Differential Equation	
					1	Formation of Partial differential equation	
					1	Problems-Solutions	
					5	Partial diff equn of first order	
					3	Problems-Solutions	
					5	Partial diff equn of second order	
					2	Problems-Solutions	
					1	Class Test	
					7	Remedial Classes	
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2.	P-II	II	A	Modern Algebra	7	Vector space	
					1	Real Quadratic Form	
			B	Geometry	3	Straight line in 3D	
					1	Problem Solution	
			C	Differential Calculus	4	Real valued function and Mean Value Theorems	
					1	Indeterminate forms	
			D	Integral calculus	1	Double integral	
					2	Application of Double Integral	
			B	L. P.P	1	Reduction of feasible solution to a B. F. S.	
					2	Solution of LPP by Graphical method	
					3	Simplex Method	
					3	Principal of Duality	
					2	Transportation Problem	
					2	Assignment Problem	
3.	P-II	III	A	Numerical Method	2	Numerical Integration	
					1	Problem solution	
					3	Numerical solution	
					1	Problem solution	
			B	Dynamics	2	Motion in a Straight line	
					1	Problem solution	
					2	Motion in 2D	
					1	Problem Solution	
			C	Probability and Statistics	7	Sampling Theory	
					2	Problem Solution	
					2	Bivariate Frequency Distribution	
					1	Problem Solution	
			D	Calculus of variation	4	Variation of functional	
					1	Problem solution	
Sl No	Hons /Gen	Paper	Group	Topic	No. of Lecture	Name of the Lecture	
4	P-III	IV	A	Boolean Algebra	10	Computer science and Programming	
					2	Problem solution	
			B	Calculus	2	Fourier Series	
					1	Problem Solution	
					1	3 <sup>rd</sup> and 4 <sup>th</sup> Order Ordinary	

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				differential equation	
			4	2 <sup>nd</sup> Order differential Equation	
			2	Problem solution	
			2	Simultaneous Linear differential Equation	
	C	Discrete Mathematics	7	Congruences	
			2	Problem solution	
			7	Application of Congruences	
			2	Problem solution	
			1	Congruence class	
			1	Problem solution	

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Month: Mar 2019-June 2019				Year-2018-2019			
Sl No	Hons/Gen	Paper	Group	Topic	No. of Lecture	Name of the Lecture	Remarks
1.	Gen Part-II				10	Revision Classes	
					10	Remedial Classes	
2.	Part-III				10	Revision Classes	
					10	Remedial Classes	