

P. N. Das College
Academic Calendar
2019-2020

| Department of Mathematics | | | | | | | |
|-----------------------------------|-----------|---------------------|-------|--|----------------|--------------------------------------|---------|
| Subject: MTMG 1 st Sem | | | | | | | |
| Month: July 2019-November 2019 | | | | | | | |
| Year-2019-2020 | | | | | | | |
| Sl No | Hons /Gen | Sem/Year | Group | Topic | No. of Lecture | Name of the Lecture | Remarks |
| 1. | Gen | 1 st Sem | | Differential Calculus | | | |
| | | | | Limit, Continuity and Differentiation | 5 | Concept of Limit | |
| | | | | | 2 | Problems-Solutions | |
| | | | | | 1 | Class test | |
| | | | | | 6 | Continuity and discontinuity | |
| | | | | | 3 | Problems- Solutions | |
| | | | | | 1 | Class test | |
| | | | | | 6 | Differentiation | |
| | | | | | 2 | Problems-Solutions | |
| | | | | | 1 | Successive Differentiation | |
| | | | | | 2 | Leibnitz Theorem and its application | |
| | | | | | 2 | Problem Solutions | |
| | | | | | 1 | Class test | |
| | | | | | 4 | Partial Differentiations | |
| | | | | | 2 | Euler's Theorem | |
| | | | | | 3 | Problem Solutions | |
| | | | | | 1 | Class test | |
| | | | | | | | |
| | | | | Applications | 2 | Tangents and Normals | |
| | | | | | 2 | Problems-Solutions | |
| | | | | | 1 | Curvatures | |
| | | | | | 2 | Problems-Solutions | |
| | | | | | 2 | Asymptotes | |
| | | | | | 3 | Problems-Solutions | |
| | | | | | 1 | Singular Points | |
| | | | | | 2 | Problems-Solutions | |
| | | | | | 5 | Tracing of curves | |
| | | | | | 3 | Tracing of curves | |
| | | | | | 1 | Class Test | |
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| | | | | Mean Value Theorem | 1 | Role's Theorem | |
| | | | | | 1 | Problems-Solutions | |
| | | | | | 5 | Mean Value Theorem | |
| | | | | | 3 | Problems-Solutions | |
| | | | | | 2 | Taylor's Theorem | |
| | | | | Mean Value Theorem | 1 | Maclaurin's Theorem | |
| | | | | | 3 | Maclaurin's Series | |
| | | | | | 2 | Problems-Solutions | |
| | | | | | 4 | Maximum and Minimum | |
| | | | | | 2 | Problems-Solutions | |

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| Subject: MTMG 2 nd Sem | | | | | | | |
| Month: Jan 2019-April 2019 for 2 nd Semester | | | | | | Year-2019-2020 | |
| Sl No | Hons /Gen | Paper | Group | Topic | No. of Lecture | Name of the Lecture | Remarks |
| 1. | Gen | 2 nd Sem | | Differential Equation | | | |
| | | | | First Order Differential Equation | 2 | Concept of differential 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 | |
| | | | | Higher Order Differential Equation | 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 | |
| | | | | Partial Differential Equation | 2 | Concept of Partial Differential Equation | |
| | | | | | 1 | Formation of Partial differential equation | |
| | | | | | 1 | Problems-Solutions | |
| | | | | Partial Differential Equation | 5 | Partial diff equn of first order | |
| | | | | | 3 | Problems-Solutions | |

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| | | | | | 5 | Partial diff equn of second order | |
| | | | | | 2 | Problems-Solutions | |
| | | | | | 1 | Class Test | |
| | | | | | 7 | Remedial Classes | |
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| Subject: MTMG 3 rd Sem | | | | | | | |
| Month: July 2019-November 2019 | | | | | | | |
| Year-2019-2020 | | | | | | | |
| Sl No | Hons /Gen | Sem/Year | Group | Topic | No. of Lecture | Name of the Lecture | Remarks |
| 2. | Gen | 3 rd Sem | | Real Analysis | | | |
| | | | | Properties of Real Numbers | 2 | Concepts of sets | |
| | | | | | 4 | Real Line and bounded sets | |
| | | | | | 3 | Completeness property | |
| | | | | | 2 | Archimedean Property | |
| | | | | | 5 | Concept of cluster points | |
| | | | | | 2 | Bolzano Weierstrass Property | |
| | | | | | 5 | Problem Solution | |
| | | | | Sequences | 5 | Concept of sequence and bounded sequence | |
| | | | | | 2 | Cauchy criterion of convergence | |
| | | | | | 2 | Cauchy's theorem on limit | |
| | | | | | 1 | Squeeze theorem | |
| | | | | | 3 | Monotone sequence and convergence | |
| | | | | | 5 | Problem Solution | |
| | | | | Series | 4 | Concepts of infinite series and it's convergence | |
| | | | | | 2 | Cauchy Criterion of convergence | |
| | | | | | 2 | Geometric series | |
| | | | | | 2 | Comparison test | |
| | | | | | 2 | Root Test | |
| | | | | | 2 | Ratio Test | |
| | | | | | 2 | Alternating series and Leibnitz's test | |
| | | | | | 2 | Absolute and Conditional Convergence | |
| | | | | | 5 | Problem Solution | |
| | | | | Sequence and Series of | 3 | Basic idea of sequence and series of functions | |
| | | | | | 5 | Pointwise and uniform convergence | |

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| | | | | | 3 | M test and Mn test | |
| | | | | | 5 | Properties of Uniform convergence for continuity , differentiability and integrability. | |
| | | | | | 6 | Power Series and radius of convergence | |
| | | | | | 4 | Problem Solution | |

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| Subject: MTMG | | | | | | | |
| Month: July 2019-November 2019 | | | | | | | |
| Year-2019-2020 | | | | | | | |
| Sl No | Hons /Gen | Sem/Year | Group | Topic | No. of Lecture | Name of the Lecture | Remarks |
| 1. | | 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 | |
| | | | 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 | |
| Month: December 2019-June 2020 | | | | | | | |
| Year-2019-2020 | | | | | | | |
| Sl No | Hons /Gen | Sem/Year | Group | Topic | No. of Lecture | Name of the Lecture | Remarks |
| 2 | | IV | A | Boolean Algebra | 10 | Computer science and Programming | |
| | | | | | 2 | Problem solution | |
| | | | B | Calculus | 2 | Fourier Series | |
| | | | | | 1 | Problem Solution | |
| | | | | | 1 | 3 rd and 4 th Order Ordinary differential equation | |
| | | | | | 4 | 2 nd Order differential Equation | |
| | | | | | 2 | Problem solution | |
| | | | | | 2 | Simultaneous Linear differential Equation | |
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| | | | C | Discrete Mathematics | 7 | Congruences | |
| | | | | | 2 | Problem solution | |
| | | | | | 7 | Application of Congruences | |
| | | | | | 2 | Problem solution | |
| | | | | | 1 | Congruence class | |
| | | | | | 1 | Problem solution | |
| | | | | | | | |
| | | | | | 10 | Revision Classes | |
| | | | | | 10 | Remedial Classes | |
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| Subject: B. Com 2 nd Sem | | | | | | | |
| Month: January 2020-April 2020 | | | | | | Year-2018-2019 | |
| Sl No | Hons/Gen | Paper | Group /Unit | Topic | No. of Lecture | Name of the Lecture | Remarks |
| 1. | Hons & Gen (Part-II) | MSBG 2.3 | | | | | |
| | | | Unit 1 | Set Theory | 4 | Concept of sets | |
| | | | | | | | |
| | | | Unit 2 | Matrices and Determinants | 2 | Preliminary concept of Matrices | |
| | | | | | 3 | Determinants | |
| | | | | | 3 | Further properties of Matrices | |
| | | | | | 2 | Solution of System of linear equations | |
| | | | | | | | |
| | | | Unit 3 | Basic Mathematics for Finance | 1 | Concept of functions | |
| | | | | | 4 | Concept of Limit of a function | |
| | | | | | 3 | Continuity of a function | |
| | | | | | 4 | Differentiation of function | |
| | | | | | 3 | Max Min of functions relating to cost revenue and profit | |
| | | | | | | | |
| | | | | | 5 | Compound interest and Annuity | |
| | | | | | | | |
| | | | Unit 4 | Basics of Statistics | 1 | Collection and classification of data | |
| | | | | | 2 | Frequency distribution | |
| | | | | | 2 | Presentation of data | |
| | | | | | | | |
| | | | Unit 5 | Measure of Central Tendency and Dispersion | 7 | Measure of Central Tendency | |
| | | | | | 8 | Measure of Dispersion | |
| | | | | | | | |
| | | | Unit 6 | Bivariate Analysis | 10 | Concept of correlation | |
| | | | | | 10 | Linear regression analysis | |
| | | | | | | | |
| | | | Unit 7 | Time based data | 8 | Index Number | |
| | | | | | 8 | Time Series Analysis | |

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|--|-----------|---------------------|--------|--------------------------------|----------------|--|---------|
| Subject: MTMG SEC (C Programming) 2 nd Sem | | | | | | | |
| Month: Jan 2019-April 2019 for 2 nd Semester Year-2019-2020 | | | | | | | |
| Sl No | Hons /Gen | Paper | Group | Topic | No. of Lecture | Name of the Lecture | Remarks |
| 1. | Gen | 2 nd Sem | | C-Programming | | | |
| | | | Unit 1 | Basics of Computer Programming | 3 | Basic ideas of programming | |
| | | | | | 1 | Algorithm | |
| | | | | | 1 | Flow charts | |
| | | | Unit 2 | Fundamentals of Programming | 1 | Data types | |
| | | | | | 1 | Assignment Statements | |
| | | | Unit 3 | Statements | 1 | Rational Operators, If-else statements | |
| | | | | | 2 | Iterative statements: loop | |
| | | | Unit 4 | Arrays | 1 | Concepts, declaration, indexing | |
| | | | | | 2 | One dimensional Array: finding maximum, minimum, simple shorting and searching | |
| | | | Unit 5 | Multi-dimensional arrays | 2 | Matrix multiplication | |
| | | | | | 3 | Array and pointers, Memory allocation and declaration | |
| | | | Unit 6 | Functions | 1 | Concepts | |
| | | | | | 1 | Variables' scope | |
| | | | | | 2 | Function Parameters | |
| | | | | | 2 | Header files and their role | |
| | | | | | 6 | Examples of programs | |