Summary of lesson plan of college Faculty

Name of College: IGN College, Ladwa Academic session 2023-24 Semester: Odd for the month of August 2023

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| Sr. no. | Name of Lecturer | Subject | Class | Topic/ chapter to be covered | Other Activity |
| 1 | Ms.Jyoti | Mathematics | B. Com I | Set Theory: Representation of sets. | Class Test to be taken |
|  |  |  | B.Sc. II | Continuous functions, The derivative and mean value theorems |  |
|  |  |  | B.Sc. III | Riemann Integral |  |
|  |  |  | BAI (MDC) | Sets and their representations, Empty set, Finite and infinite sets, Subsets, Equal sets, Power sets, Universal set, Union and intersection of sets, Difference of two sets, Complement of a set, Venn diagram, De-Morgan’s laws and their applications. An introduction to matrices and their types, Operations on matrices, Symmetric and skew-symmetric matrices, Minors, Co-factors. Determinant of a square matrix, Adjoint and inverse of a square matrix, Solutions of a system of linear equations up to order 3. |  |
|  |  |  | BA/BSc. I(Major) Practical  | * Problems of curve tracing when equation is given inCartesian coordinates.
* Problems of curve tracing when equation is given inParametric form.
* Problems of curve tracing when equation is given in Polar coordinates.
* Problem of determination of length of a curve expressed in Cartesian coordinates.
* Problem of determination of length of a curve expressed in Polar coordinates.
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|  |  |  | BA/BSc III(Practical) | PROGRAM TO DEMONSTRATE NEWTON FORWARD INTERPOLATION FORMULA |  |
|  |  |  | BAI (MDC)(Practical) | 1. Problems related to union, intersection, difference and complement of sets. 2. Problems based on De Morgan’s Laws. 3. Problems related to Venn diagrams. 4. Problems to find inverse of a matrix. |  |

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| --- | --- | --- | --- | --- | --- |
| Sr. no. | Name of Lecturer | Subject | Class | Topic/ chapter to be covered | Other Activity |
| 1 | Ms.Jyoti | Mathematics | B.Com I | Logarithms: Laws of operation, log tables; Arithmetic and geometric progression | Assignment I to be taken |
|  |  |  | B.Sc. II | Indeterminants forms,limit and continuity of functions of two variables, Partial differentiation |  |
|  |  |  | B.Sc. III | Improper Integrals and Their Convergence, Integral as A Function of a Parameter, Metric Spaces, Open and Closed Sets in Metric Spaces, Completeness in Metric Spaces |  |
|  |  |  | BA/BSc I (Major) Practical | * Problem of determination of radius of curvature expressed inCartesian coordinates.
* Problem of determination of radius of curvature expressed in Polar coordinates.
* Problem of determination of radius of curvature expressed in Parametric form.
* Problem of determination of volumes and surfaces of solids of revolution for Cartesian curve.
* Problem of determination of volumes and surfaces of solidsof revolution for Parametric curve.
* Problem of determination of volumes and surfaces of solids of revolution for Polar curve.
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|  |  |  | BA/BSc III (Practical) | PROGRAM TO DEMONSTRATE LAGRANGE'S INTERPOLATION FORMULA |  |
|  |  |  |  | PROGRAM TO DEMONSTRATE TRAPEZOIDAL RULE |  |
|  |  |  |  | PROGRAM TO DEMONSTRATE SIMPSON'S 1/3 RULE |  |
|  |  |  |  | PROGRAM TO DEMONSTRATE SIMPSON'S 3/8 RULE |  |
|  |  |  | BAI (MDC) | Complex numbers, Operations on complex numbers, Modulus and argument of a complex number. Linear inequalities, Algebraic solutions of linear inequalities in two variables and their graphical representation. Quadratic equations, Solution of quadratic equations. |  |
|  |  |  | BAI (MDC)(Practical) | Problems to find determinant of a square matrix of order 3. Problems to find nth term of A.P., G.P. and H.P.  Problems to find sum of n terms of A.P., G.P. and H.P. |  |

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| --- | --- | --- | --- | --- | --- |
| Sr. no. | Name of Lecturer  | Subject | Class | Topic/ chapter to be covered | Other Activity |
| 1 | Ms.Jyoti | Mathematics | B. Com I | Matrices and Determinants. inverse of a square matrix, solutions of a system of linear equations by examples. | Class Test to be taken |
|  |  |  | B.Sc. II | Differentiability of functions of two variables, Maximum and minimum of a function of two variables |  |
|  |  |  | B.Sc. III | Continuity, Uniform Continuity, Compactness, Connectednessin Metric Spaces |  |
|  |  |  | BA/BSc I(Major ) Practical | * Learn to use basic operators and functions in Maximasoftware.
* Simplify algebraic expressions and expressions containing radicals, logarithms, exponentials and trigonometric functions.
* Expand algebraic, rational, trigonometric and logarithmic expressions.
* Find derivatives of algebraic, trigonometric, exponential and

logarithmic functions.* Find derivatives of functions involving above mentioned

functions. |  |
|  |  |  | BA/BSc III (Practical) | PROGRAM TO DEMONSTRATE RUNGA-KUTTA METHOD OF FOURTH ORDER |  |
|  |  |  |  | PROGRAM TO DEMONSTRATE MILNE SIMPSON'S METHOD |  |
|  |  |  | BAI (MDC) | Arithmetic progression, Geometric progression, Harmonic progression, Arithmetic mean (A.M.), Geometric mean (G.M.), Harmonic mean (H.M.), Relation between A.M., G.M. and H.M. |  |
|  |  |  | BAI (MDC)(Practical) | Problems to find A.M., G.M. and H.M. of given numbers. Problems to find modulus and argument of a complex number.  Problems involving formulation and solution of quadratic equations in one variable. |

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| Sr. no. | Name of Lecturer  | Subject | Class | Topic/ chapter to be covered | Other Activity |
| 1 | Ms.Jyoti | Mathematics | B.Com I | Compound interest and annuities. valuation of simple loans and debentures, problems related to sinking funds.Arithmetic and geometric progression. | Assignment II to be taken |
|  |  |  | B.Sc. II | Forces Acting at A Point, Parallel Forces, Moments, Couples, Analytic Conditions of Equilibrium of Coplanar Forces.Centre Of Gravity. |  |
|  |  |  | B.Sc. III | Finite Difference Operators, Interpolation with Equal Intervals, Interpolation with Unequal Intervals, Central Difference Interpolation Formula . Probability Distribution |  |
|  |  |  | BA/BSc I (Major) Practical | * Problems of successive differentiation.
* Find indefinite integrals of different functions.
* Find definite integrals of different functions.
* To plot curves involving Cartesian, parametric and polar forms.
* To demonstrate singular points.
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|  |  |  | BA/BSc III (Practical) | PROGRAM TO DEMONSTRATE EULER'S METHODPROGRAM TO DEMONSTRATE EULER'S MODIFIED METHOD |  |
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|  |  |  | BAI (MDC)(Practical) | Problems to represent solutions of linear inequalitiesgraphically. Problems based on angle between two lines. Problems involving straight lines and their slope. Problems related to a circle. |  |
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|  |  |  | BAI (MDC) | Straight lines: Slope of a line and angle between two lines, Different forms of equation of a line: Parallel to co-ordinate axes, Point-slope form, Slope-intercept form, Two-point form, General form; Distance of a point from a straight line. Standard form of a circle and its properties. |  |