**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 Assistant Professor** | **Subject** | **Class** | **Topic/ chapter to be covered** | **Other Activity** |
| **1** | **Dr. Vandana****Gupta** | Mathematics | BA/BSc III(Practical) | PROGRAM TO DEMONSTRATE NEWTON FORWARD INTERPOLATION FORMULA | Class Test to be taken |
|  |  |  |  | PROGRAM TO DEMONSTRATE NEWTON BACKWARD INTERPOLATION FORMULA |
|  |  |  | BA/BSc. I(Major) | LIMIT, CONTINUITY, DERIVABILITY, INDETERMINATE FORM, SUCCESSIVE DIFFERENTIATION, SOME GENERAL THEOREMS ON DIFFERENTIABLE FUNCTIONS |
|  |  |  | BA/BSc. I(Major) Practical  | * Problems of curve tracing when equation is given in Cartesian coordinates.
* Problems of curve tracing when equation is given in Parametric 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. I(Minor) | LIMIT, CONTINUITY, DERIVABILITY, INDETERMINATE FORM |
|  |  |  | BA/BSc. I(Minor) Practical | * Practical problems to check the limit and continuity of a function.
* Practical problems to check the differentiability of a

function.* Practical problems of finding derivatives of algebraic, trigonometric, exponential and logarithmic functions.
* Practical problems of finding nth derivatives using Leibnitz theorem.
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|  |  |  | BA/BSc. II | FORMATION OF PARTIAL DIFFERENTIAL EQUATIONS, FIRST ORDER LINEAR PARTIAL DIFFERENTIAL EQUATIONS |
|  |  |  |  | FIRST ORDER NON LINEAR PARTIAL DIFFERENTIAL EQUATIONS |
|  |  |  | BA/BSc III | GROUPS AND SUBGROUPS |
|  |  |  |  | COSETS, HOMOMORPHISMS AND AUTOMORPHISMS |

**Summary of lesson plan of college Faculty**

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

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| **Sr. no.** | **Name of Assistant Professor** | **Subject** | **Class** | **Topic/ chapter to be covered** | **Other Activity** |
| **1** | **Dr. Vandana****Gupta** | Mathematics | BA/BSc III (Practical) | PROGRAM TO DEMONSTRATE LAGRANGE'S INTERPOLATION FORMULA | Assignment I to be taken |
|  |  |  |  | PROGRAM TO DEMONSTRATE TRAPEZOIDAL RULE |
|  |  |  |  | PROGRAM TO DEMONSTRATE SIMPSON'S 1/3 RULE |
|  |  |  |  | PROGRAM TO DEMONSTRATE SIMPSON'S 3/8 RULE |
|  |  |  | BA/BSc I (Major) | CURVATURE, SINGULAR POINTS, CURVE TRACING, REDUCTION FORMULA |
|  |  |  | BA/BSc I (Major) Practical | * Problem of determination of radius of curvature expressed in Cartesian 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 solids of revolution for Parametric curve.
* Problem of determination of volumes and surfaces of solids of revolution for Polar curve.
 |
|  |  |  | BA/BSc I (Minor) | SUCCESSIVE DIFFERENTIATION, SOME GENERAL THEOREMS ON DIFFERENTIABLE FUNCTIONS |
|  |  |  | BA/BSc I (Minor) Practical | * Practical problems related to application of Taylor's theorem.
* Practical problems to find the asymptotes of a given algebraic curve.
* Practical application of L’Hospital rule to evaluate indeterminate forms.
* Practical problems to find the asymptotes of a polar curve.
* Practical problems to find Maclaurin’s series expansion of various functions.
* Practical problems based on reduction formulae.
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|  |  |  | BA/BSc II | CLASSIFICATION AND CANONICAL FORMS OF SECOND ORDER LINEAR PARTIAL DIFFERENTIAL EQUATIONS |
|  |  |  |  | MONGE'S METHOD FOR PARTIAL DIFFERENTIAL EQUATIONS OF SECOND ORDER, CAUCHY'S PROBLEM, METHOD OF SEPERATION OF VARIABLES |
|  |  |  | BA/BSc III | PERMUTATION GROUPS, RINGS AND FIELDS |
|  |  |  |  | IDEALS AND QUOTIENT RINGS, HOMOMORPHISMS OF RINGS |
|  |  |  |  | EUCLIDEAN RINGS |

**Summary of lesson plan of college Faculty**

Name of College: **IGN College, Ladwa** Academic session **2023-24** Semesters: **Odd** for the month of **October 2023**

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| **Sr. no.** | **Name of Assistant Professor** | **Subject** | **Class** | **Topic/ chapter to be covered** | **Other Activity** |
| **1** | **Prof. Vandana Gupta** | Mathematics | BA/BSc III (Practical) | PROGRAM TO DEMONSTRATE RUNGA-KUTTA METHOD OF FOURTH ORDER | Assignment II and mid-term exam to be taken |
|  |  |  |  | PROGRAM TO DEMONSTRATE MILNE SIMPSON'S METHOD |
|  |  |  | BA/BSc I(Major ) | RECTIFICATION, QUADRATURE |
|  |  |  | BA/BSc I(Major ) Practical | * Learn to use basic operators and functions in Maxima software.
* 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 I(Minor ) | ASYMPTOTES  |
|  |  |  | BA/BSc I(Minor ) Practical | * Introduce basic operators and functions in Maxima software.
* 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. |
|  |  |  | BA/BSc II | VIRTUAL WORK, FORCES IN THREE DIMENSIONS |
|  |  |  |  | WRENCHES,NULL LINES AND NULL PLANES |
|  |  |  | Bsc III | POLYNOMIAL RINGS |
|  |  |  |  | NUMERICAL DIFFERENTIATION EIGEN VALUE PROBLEMS,  |

**Summary of lesson plan of college Faculty**

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

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| **Sr. no.** | **Name of Assistant Professor** | **Subject** | **Class** | **Topic/ chapter to be covered** | **Other Activity** |
| **1** | **Dr. Vandana****Gupta** | Mathematics | BA/BSc III (Practical) | PROGRAM TO DEMONSTRATE EULER'S METHODPROGRAM TO DEMONSTRATE EULER'S MODIFIED METHOD | Test |
|  |  |  | BA/BSc I (Major) | VOLUMES AND SURFACE OF SOLIDS OF REVOLUTION |
|  |  |  | 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.
 |
|  |  |  | BA/BSc I (Minor) | REDUCTION FORMULA |
|  |  |  | BA/BSc I (Minor) Practical | * Find derivatives of functions involving above mentioned functions.
* Find indefinite integrals of different functions.
* Find definite integrals of different functions.
 |
|  |  |  | Bsc II | STABLE , UNSTABLE ANDNEUTRAL EQUILIBRIUM |
|  |  |  | Bsc III | NUMERICAL INTEGRATION AND NUMERICAL SOLUTION OF ORDINARY DIFFERENTIAL EQUATIONS |

**Summary of lesson plan of college Faculty**

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

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| **Sr. no.** | **Name of Assistant Professor** | **Subject** | **Class** | **Topic/ chapter to be covered** | **Other Activity** |
| **1** | **Dr. Vandana****Gupta** | Mathematics | BA/BSc III (Practical) | REVISION | Test |
|  |  |  | BA/BSc I (Major) | REVISION |
|  |  |  | BA/BSc I (Major) Practical | REVISION |
|  |  |  | BA/BSc I (Minor) | REVISION |
|  |  |  | BA/BSc I (Minor) Practical | REVISION |
|  |  |  | Bsc II | REVISION |
|  |  |  | Bsc III | REVISION |