# KVA DAV College for Women, Karnal <br> SESSION 2020-2021 

## Weekly Lesson Plan (Odd Semester)

Name of the Paper:- Algebra
Name of the Teacher : Dr. Shweta Dhawan

| WEEK | DATE | TOPICS |
| :---: | :---: | :---: |
| 1 | November(16-21) | Matrices and Elementary Properties |
|  |  | Matrices and Elementary Properties |
|  |  | Matrices and Elementary Properties |
|  |  | Matrices and Elementary Properties |
|  |  | Matrices and Elementary Properties |
|  |  | Matrices and Elementary Properties |
| SUNDAY - 22.11.2020 |  |  |
| 2 | November(23-28) | Matrices and Elementary Properties |
|  |  | Matrices and Elementary Properties |
|  |  | Rank of a Matrix |
|  |  | Row Echelon Form |
|  |  | Row Echelon Form |
|  |  | Row reduced echelon form |
| SUNDAY - 29.11.2020 |  |  |
| HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti) |  |  |
| 3 | December (1-5) | Row reduced echelon form |
|  |  | Theorem based on Normal Form |
|  |  | Normal Form |
|  |  | Normal Form |
|  |  | Inverse of a Matrix |
| SUNDAY - 06.12.2020 |  |  |
| 4 | December(07-12) | Inverse of a Matrix |
|  |  | Elementary matrices |
|  |  | Elementary matrices |
|  |  | Linearly independent and dependant vectors |
|  |  | Linearly independent and dependant vectors |
|  |  |  |
| SUNDAY - 13.12.2020 |  |  |
| 5 | December$(14-19)$ | Orthogonal Matrix |
|  |  | Unitary Matrix |
|  |  | Characteristic roots of a matrix |
|  |  | Characteristic roots of a matrix |
|  |  | Characterstic Vectors of a Matrix |
|  |  | Characterstic Vectors of a Matrix |
|  |  | SUNDAY - 20.12.2020 |

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| 6 | $\begin{gathered} \text { December } \\ (21-24)(26) \end{gathered}$ | Theroems Based on characteristic roots of a matrix |
| :---: | :---: | :---: |
|  |  | Theroems Based on characteristic roots of a matrix |
|  |  | Cayley hamilton theorem |
|  |  | questions based on cayley Hamilton Theorem |
|  |  |  |
| HOLIDAY - 25.12.2020 (Christmas) |  |  |
| SUNDAY - 27.12.2020 |  |  |
| 7 | $\begin{gathered} \text { December } \\ (28-31) \\ \text { January (1-2) } \end{gathered}$ | Minimal Polynomial of a matrix |
|  |  | Minimal Polynomial of a matrix |
|  |  | Application of matrices to solve system of equations |
|  |  | Application of matrices to solve system of equations |
|  |  | Non-Homogeneous system of equations |
|  |  | Non-Homogeneous system of equations |
| SUNDAY - 03.01.2021 |  |  |
| 8 | January (4-9) | Homogeneous system of equations |
|  |  | General properties of polynomial and equations |
|  |  | Thoerem based on polynomials |
|  |  | Horner's method of synthetic division |
|  |  | Fundamental theorem of algebra |
|  |  | numericals based on polynomials |
| SUNDAY - 10.01.2021 |  |  |
| 9 | January (11-16) | Horner's method of synthetic division |
|  |  | Horner's method of synthetic division |
|  |  | Fundamental theorem of algebra |
|  |  | Thoerem based on polynomials |
|  |  | numericals based on polynomials |
|  |  | Relation between the roots and coefficients of an equation |
| SUNDAY - 17.01.2021 |  |  |
| 10 | $\begin{gathered} \text { January (18-19) } \\ 21-23) \end{gathered}$ | Relation between the roots and coefficients of an equation |
|  |  | common roots and repeated roots |
|  |  | Transformation of equation |
|  |  | Diminishing roots by a given number |
|  |  | Equation with binomial coefficients |
| HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti) |  |  |
| SUNDAY - 24.01.2021 |  |  |
| 11 | $\begin{gathered} \text { January (25) } \\ \text { (27-30 } \end{gathered}$ | Transform an equation whose roots are algebraic functions of the roots of the given equation |
|  |  | Transform an equation whose roots are algebraic functions of the roots of the given equation |
|  |  | Roots of squared differences of a cubic |
|  |  | Discarte's rule of sign |
|  |  | Discarte's rule of sign |
| HOLIDAY - 26.01.2021 (Republic Day) |  |  |
| SUNDAY - 31.01.2021 |  |  |

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| 12 | February (01-06) | Cardan's method to solve cubic equation |
| :---: | :---: | :---: |
|  |  | Irreducible case of Cardan's method |
|  |  | numericals based on Cardan;s method |
|  |  | Biquadratic Equation by Decarte's rule |
|  |  | Ferrari's method of solving biquadratic equation |
|  |  | Numericals based on biquadratic equation |
| SUNDAY - 07.02.2021 |  |  |
| 13 | February (08-13) | Bilinear form |
|  |  | Canonical bilinear form |
|  |  | Matrix of quadratic form |
|  |  | Rank, Index and signature of a quadratic form |
|  |  | lagrange's method of diagonalisation |
|  |  | Factorisation of a quadratic form |
| SUNDAY - 14.02.2021 |  |  |
| 14 | February(15-20) | Nature of quadratic form |
|  |  | Revision |
|  |  | Revision |
|  |  | Revision |
|  |  | Revision |
|  |  | Revision |

## Weekly Lesson Plan (Odd Semester)

Name of the Paper:- Calculus
Name of the Teacher : Dr. Manju Sharma

| WEEK | DATE | TOPICS |
| :---: | :---: | :---: |
| 1 | November <br> (16-21) | Derivative of a Function, Basics of Differentiation and Integration |
|  |  | Successive Differentiation |
|  |  | Questions based on Successive Differentiation |
|  |  | Questions based on Successive Differentiation |
|  |  | Differentiation of Parametric Functions |
|  |  | Differentiation of Parametric Functions |
| SUNDAY - 22.11.2020 |  |  |
| 2 | November(23-28) | Differentiation using Partial Fractions |
|  |  | Differentiation using Partial Fractions |
|  |  | Leibnitz's Theorem |
|  |  | Questions based on Leibnitz's Theorem |
|  |  | Questions based on Leibnitz's Theorem |
|  |  | Applications of Leibnitz's Theorem |
| SUNDAY - 29.11.2020 |  |  |
| HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti) |  |  |
|  |  | Problem Discussion |
| 3 | December (1-5) | Taylor's Theorem with Lagrange's form of remainder Questions based on Taylor's Theorem |

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|  |  | Taylor's Theorem with Cauchy's form of remainder Questions based on Taylor's Theorem with Cauchy's form of remainder |
| :---: | :---: | :---: |
| SUNDAY - 06.12.2020 |  |  |
| 4 | December(07-12) | Infinite Series |
|  |  | Infinite Series |
|  |  | Infinite Series |
|  |  | Applications of Taylor's Series |
|  |  | Applications of Taylor's Series |
|  |  | Expansion by Differential Equations |
| SUNDAY - 13.12.2020 |  |  |
| 5 | December(14-19) | Expansion by Differential Equations |
|  |  | Asymptotes |
|  |  | Oblique Asymptotes and Questions based on it |
|  |  | Oblique Asymptotes of Algebraic Curve |
|  |  | Oblique Asymptotes of Algebraic Curve |
|  |  | Oblique Asymptotes of Algebraic Curve |
| SUNDAY - 20.12.2020 |  |  |
| 6 | $\begin{gathered} \text { December } \\ (21-24)(26) \end{gathered}$ | Intersection of Curve and its Asymptotes |
|  |  | Intersection of Curve and its Asymptotes |
|  |  | Polar Asymptotes |
|  |  | Polar Asymptotes |
|  |  | Problem Discussion |
| HOLIDAY - 25.12.2020 (Christmas) |  |  |
| SUNDAY - 27.12.2020 |  |  |
| 7 | $\begin{gathered} \text { December } \\ (28-31) \\ \text { January (1-2) } \end{gathered}$ | Curvature |
|  |  | Articles related to Curvature |
|  |  | Questions based on Curvature |
|  |  | Questions based on Curvature |
|  |  | Radius of Curvature in Polar Form |
|  |  | Radius of Curvature in Polar Form |
| SUNDAY - 03.01.2021 |  |  |
| 8 | January (4-9) | Curvature at Origin |
|  |  | Centre of Curvature and Evolute of a Curve |
|  |  | Centre of Curvature and Evolute of a Curve |
|  |  | Curve Tracing |
|  |  | Curve Tracing <br> Parametric Equations |
| SUNDAY - 10.01.2021 |  |  |
| 9 | January (11-16) | Tracing of Polar Curves |
|  |  | Tracing of Polar Curves |
|  |  | Reduction Formulae |
|  |  | Articles related to Reduction Formulae |
|  |  | Articles related to Reduction Formulae Questions based on Reduction Formulae |
| SUNDAY - 17.01.2021 |  |  |
|  |  | Questions based on Reduction Formulae |
|  |  | Questions based on Reduction Formulae |


| 10 | KVA DAV College for Women, Karnall |  |
| :---: | :---: | :---: |
|  | January (18-19) | Rectification, Fundamental Theorem about Rectification |
|  | 21-23) | Rectification, Fundamental Theorem about Rectification |
|  |  | Length of Parametric Curves |
| HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti) |  |  |
| SUNDAY - 24.01.2021 |  |  |
| 11 | $\begin{gathered} \text { January (25) } \\ (27-30 \end{gathered}$ | Length of Parametric Curves |
|  |  | Length of Polar Curves |
|  |  | Intrinsic Equation of a Curve |
|  |  | Quadrature |
|  |  | Questions based on Quadrature |
| HOLIDAY - 26.01.2021 (Republic Day) |  |  |
| SUNDAY - 31.01.2021 |  |  |
| 12 | February (01-06) | Area Between Two Curves |
|  |  | Area Formula for Parametric Curves |
|  |  | Area Formula for Parametric Curves |
|  |  | Area Between Two Polar Curves |
|  |  | Volume of a Solid of Revolution |
|  |  | Axis of Revolution |
| SUNDAY - 07.02.2021 |  |  |
| 13 | February (08-13) | Volume formula for Polar Curves and Parametric Curves |
|  |  | Area of a Surface of Revolution |
|  |  | Theorems and questions based on Limits of Functions |
|  |  | Theorems and questions based on Limits of Functions |
|  |  | Continuous Functions |
|  |  | Theorems and questions based on Continuous Functions |
| SUNDAY - 14.02.2021 |  |  |
| 14 | February(15-20) | Theorems and questions based on Continuous Functions |
|  |  | Singular Points |
|  |  | Articles and Questions based on Singular Points |
|  |  | Articles and Questions based on Singular Points |
|  |  | Articles and Questions based on Singular Points |
|  |  | Problem Discussion |


| Name of Assistant Lecturer $\quad:$ Ms.SILKY |  |
| :--- | :--- |
| Class $\quad:$ B.SC.I/B.A.I |  |
| Semester | $:$ I |
| Subject | $:$ MATHS |
| Paper | :BM-113(SOLID GEOMETRY) |
| From DECEMBER | 2020 to February 2021 |


| Week 1 |  |
| :--- | :--- |
| Week1,Day1 8/12/2020 | General equation of second degree.conic sections-classification |
| Week1,Day2 9/12/2020 | To find -centre,lengths and equation of axes of central conic. |
| Week1,Day3 10/12/2020 | To find -foci,directrix of the conic. |
| Week1,Day4 <br> 11/12/2020 | To find the axis,latus rectum and tangent at the vertex of the parabola. |
| Week1,Day5 12/12/2020 | To find the equation of director circle. |
| Week 2 |  |
| Week2,Day1 14/12/2020 | Tracing of conics. |
| Week2,Day2 <br> 15/12/2020 | Tangent at any point to the conic. |
| Week2,Day3 16/12/2020 | Chord of contact. |
| Week2,Day4 <br> 17/12/2020 | Pole of line to the conic. |
| Week2,Day5 18/12/2020 | Director circle of conic. |
| Week2,Day6 19/12/2020 | Systems of conics.confocal conics. |
| Week 3 | Cones:right circular cone,enveloping cone. |
| Week3,Day1 21/12/2020 | Polar equation of conic. |
| Week3,Day2 22/12/2020 | Tangent and normal to the conic. |
| Week3,Day3 |  |
| 23/12/2020 | Sphere:plane section of sphere,sphere through a given circle. |
| Week3,Day4 24/12/2020 | Intersection of two spheres.,coaxal system of spheres. |
| Week3,Day5 |  |
| 25/12/2020 | Christmas Day |
| Week3,Day6 26/12/2020 | Cone\| |

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| Week4,Day1 28/12/2020 | Revision and tests. |
| :---: | :---: |
| $\begin{aligned} & \text { Week4,Day2 } \\ & \text { 29/12/2020 } \end{aligned}$ | Continued revision. |
| Week4,Day3 30/12/2020 | Cylinder:right circular cylinder. |
| $\begin{aligned} & \text { Week4,Day4 } \\ & 31 / 12 / 2020 \end{aligned}$ | Enveloping cylinder. |
| $\begin{aligned} & \text { Week4,Day5 } \\ & 1 / 1 / 2021 \end{aligned}$ | Continued with examples and exercises. |
| $\begin{aligned} & \hline \text { Week4,Day6 } \\ & 2 / 1 / 2021 \\ & \hline \end{aligned}$ | Central conicoids:equation of tangent plane. |
| Week 5 |  |
| $\begin{aligned} & \hline \text { Week5,Day1 } \\ & \text { 04/01/2021 } \\ & \hline \end{aligned}$ | Equation of director sphere with examples. |
| Week5,Day2 05/01/2021 | Normal to the conicoids. |
| $\begin{aligned} & \hline \text { Week5,Day3 } \\ & \text { 06/01/2021 } \\ & \hline \end{aligned}$ |  |
| Week5,Day4 07/01/2021 | Polar plane of a point. |
| Week5,Day5 08/01/2021 | Enveloping cone of a conicoid. |
| Week5,Day6 09/01/2021 | Enveloping cylinder of a conicoid. |
| Week 6 |  |
| Week6,Day1 11/01/2021 | Continued conicoid with examples. |
| Week6,Day2 12/01/2021 | Continued conicoids with exercises. |
| $\begin{aligned} & \text { Week6,Day } 3 \\ & 13 / 01 / 2021 \end{aligned}$ | Revision and tests. |
| Week6,Day4 14/01/2021 | Revision and tests. |
| Week6,Day5 15/01/2021 | Introduction to paraboloids. |
| Week6,Day6 16/01/2021 | Paraboloids:circular section |
| Week 7 |  |
| Week7,Day1 18/01/2021 | Discuss paraboloids with examples. |
| Week7,Day2 19/01/2021 | Discuss paraboloids with exercises. |
| Week7,Day3 20/01/2021 | Guru Gobind Singh Jayanti |
| Week7,Day4 21/01/2021 | Plane section of conicoids. |
| Week7,Day5 22/01/2021 | Continued examples. |
| Week7,Day6 23/01/2021 | Continued exercises. |
| Week 8 |  |
| Week8,Day1 25/01/2021 | Generating lines and its properties. |
| Week8,Day2 26/01/2021 | Republic Day |
| Week8,Day3 27/01/2021 | Continued properties. |
| Week8,Day4 28/01/2021 | Continued examples of generating lines. |
| Week8,Day5 29/01/2021 | Continued exercises. |
| Week8,Day6 30/01/2021 | Confocal conicoids:introduction to confocal conicoids. |
| Week 9 |  |

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| Week9,Day1 01/02/2021 | Discuss results with examples. |
| :--- | :--- |
| Week9,Day2 02/02/2021 | Continued examples. |
| Week9,Day3 03/02/2021 | Continued exercises. |
| Week9,Day4 04/02/2021 | Revision and tests. |
| Week9,Day5 05/02/2021 | Revision and tests. |
| Week9,Day6 06/02/2021 | Revision and tests. |
| Week 10 |  |
| Week10,Day1 08/02/2021 | Reduction of second degree equations. |
| Week10,Day2 09/02/2021 | Discuss properties and their nature. |
| Week10,Day3 10/02/2021 | Discuss about their standard form. |
| Week10,Day4 11/02/2021 | Revision and tests. |
| Week10,Day5 12/02/2021 | Revision and tests |
| Week 10,Day 6 <br> 13/02/2021 | sessional |

Weekly Lesson Plan (Odd Semester)
Name of the Paper:- Advanced Calculus
Name of the Teacher : Dr Manju Sharma

| WEEK | DATE | TOPICS |
| :---: | :---: | :---: |
| 1 | $\begin{gathered} \text { November } \\ (2-3),(5-7) \end{gathered}$ | Introduction |
|  |  | Continuous Function |
|  |  | Continuous Function |
|  |  | Continuous Function |
|  |  | Continuous Function |
| SUNDAY - 08.11.2020 |  |  |
| 2 | November(9-13) | Continuous Function |
|  |  | Continuous Function |
|  |  | Continuous Function |
|  |  | Continuous Function |
|  |  | Uniform Continuity |
| HOLIDAY - 14.11.2020 (Diwali) |  |  |
| SUNDAY - 15.11.2020 |  |  |
| 3 | November(16-21) | Uniform Continuity |
|  |  | Uniform Continuity |
|  |  | The Derivatives and M.V.T.S |
|  |  | The Derivatives and M.V.T.S |
|  |  | The Derivatives and M.V.T.S |
|  |  | The Derivatives and M.V.T.S |

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|  |  | SUNDAY - 22.11.2020 |
| :---: | :---: | :---: |
| 4 | November(23-28) | Cauchys M.V.T. |
|  |  | Cauchys M.V.T. |
|  |  | Cauchys M.V.T. |
|  |  | Cauchys M.V.T. |
|  |  | Indeterminate form |
|  |  | Indeterminate form |
| SUNDAY - 29.11.2020 |  |  |
| HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti) |  |  |
| 5 | December (1-5) | Indeterminate form |
|  |  | Indeterminate form |
|  |  | Indeterminate form |
|  |  | Indeterminate form |
|  |  | Indeterminate form |
| SUNDAY - 06.12.2020 |  |  |
| 6 | December(07-12) | Indeterminate form |
|  |  | Limit, Continuity of function of Two varuables |
|  |  | Limit, Continuity of function of Two varuables |
|  |  | Limit, Continuity of function of Two varuables |
|  |  | Limit, Continuity of function of Two varuables |
|  |  | Limit,Continuity of function of Two varuables |
| SUNDAY - 13.12.2020 |  |  |
| 7 | December(14-19) | Limit, Continuity of function of Two varuables |
|  |  | Limit, Continuity of function of Two varuables |
|  |  | Partial Differentiation |
|  |  | Partial Differentiation |
|  |  | Partial Differentiation |
|  |  | Partial Differentiation |
|  |  | SUNDAY - 20.12.2020 |
| 8 | $\begin{array}{r} \text { December } \\ (21-24)(26) \end{array}$ | Partial Differentiation |
|  |  | Partial Differentiation |
|  |  | Partial Differentiation |
|  |  | Partial Differentiation |
|  |  | Partial Differentiation |
| HOLIDAY - 25.12.2020 (Christmas) |  |  |
|  |  | SUNDAY - 27.12.2020 |
| 9 | $\begin{gathered} \text { December } \\ (28-31) \\ \text { January (1-2) } \end{gathered}$ | Total Derivatve |
|  |  | Total Derivatve |
|  |  | Total Derivatve |
|  |  | Total Derivatve |
|  |  | Total Derivatve |
|  |  | Differentiation of Funtion of Two variable |
| SUNDAY - 03.01.2021 |  |  |
|  |  | Differentiation of Funtion of Two variable |

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| 10 | January (4-9) | Differentiation of Funtion of Two variable |
| :---: | :---: | :---: |
|  |  | Differentiation of Funtion of Two variable |
|  |  | Differentiation of Funtion of Two variable |
|  |  | Differentiation of Funtion of Two variable |
|  |  | Differentiation of Funtion of Two variable |
| SUNDAY - 10.01.2021 |  |  |
| 11 | January (11-16) | Differentiation of Funtion of Two variable |
|  |  | Differentiation of Funtion of Two variable |
|  |  | Differentiation of Funtion of Two variable |
|  |  | Maxima and Minima of Functions |
|  |  | Maxima and Minima of Functions |
|  |  | Maxima and Minima of Functions |
| SUNDAY - 17.01.2021 |  |  |
| 12 | January (18-19) (21-23) | Maxima and Minima of Functions |
|  |  | Maxima and Minima of Functions |
|  |  | Maxima and Minima of Functions |
|  |  | Maxima and Minima of Functions |
|  |  | Curves in space |
| HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti) |  |  |
|  |  | SUNDAY - 24.01.2021 |
| 13 | $\begin{gathered} \text { January (25) } \\ (27-30) \end{gathered}$ | Curves in space |
|  |  | Curves in space |
|  |  | Curves in space |
|  |  | Curves in space |
|  |  | Curves in space |
| HOLIDAY - 26.01.2021 (Republic Day) |  |  |
|  |  | SUNDAY - 31.01.2021 |
| 14 | February (01-06) | Curves in space |
|  |  | Curves in space |
|  |  | Curves in space |
|  |  | Circle of Cirvature ans Spherical Curvatures |
|  |  | Circle of Cirvature ans Spherical Curvatures |
|  |  | Circle of Cirvature ans Spherical Curvatures |
|  |  | SUNDAY - 07.02.2021 |
| 15 | February (08-13) | Circle of Cirvature ans Spherical Curvatures |
|  |  | Involutes and Evolutes |
|  |  | Involutes and Evolutes |
|  |  | Involutes and Evolutes |
|  |  | Involutes and Evolutes |
|  |  | Involutes and Evolutes |
| SUNDAY - 14.02.2021 |  |  |
| 16 | February(15-20) | Concept of a Surface and Envelops |
|  |  | Concept of a Surface and Envelops |
|  |  | Concept of a Surface and Envelops |
|  |  | Revision |

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$\square$| Revision |
| :--- | :--- |
| Revision |

Weekly Lesson Plan (Odd Semester)
(3rd Semester)
Name of the Paper:- P D E CLASS: B.Sc II


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| 6 | December(07-12) | Method of find P.Integral for others method |
| :---: | :---: | :---: |
|  |  | examples |
|  |  | examples |
|  |  | class discussion |
|  |  |  |
|  |  |  |
| SUNDAY - 13.12.2020 |  |  |
| 7 | December(14-19) | Non homogeneous linear partial differential equation |
|  |  | Finding c.f of reducible non homogenous |
|  |  | General method for irreducible linear partial |
|  |  |  |
|  |  |  |
|  |  |  |
| SUNDAY - 20.12.2020 |  |  |
| 8 | $\begin{array}{r} \text { December } \\ (21-24)(26) \end{array}$ | Non homogeneous linear partial differential equation |
|  |  | Finding c.f of reducible non homogenous |
|  |  | General method for irreducible linear partial |
|  |  |  |
|  |  |  |
| HOLIDAY - 25.12.2020 (Christmas) |  |  |
| SUNDAY - 27.12.2020 |  |  |
| 9 | December (28-31) <br> January (1-2) | Method of find P.Integral for algrbric function |
|  |  | Examples |
|  |  | Examples |
|  |  | class discussion |
|  |  |  |
|  |  |  |
| SUNDAY - 03.01.2021 |  |  |
| 10 | January(4-9) | classification of linear partial differential equation |
|  |  | Reduction to canonical forms |
|  |  | Hyperbolic equation reduce in canonical forms |
|  |  | Examples |
|  |  |  |
|  |  |  |
| SUNDAY - 10.01.2021 |  |  |
| 11 | January(11-16) | Parabolic equation reduce in canonical forms |
|  |  | elliptic equation reduce in canonical forms |
|  |  | Examples |
|  |  | Examples |
|  |  | class discussion |
|  |  |  |
| SUNDAY - 17.01.2021 |  |  |

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| 12 | $\begin{gathered} \text { January } \\ (18-19)(21-23) \end{gathered}$ | Solution of linear hyperbolic equation |
| :---: | :---: | :---: |
|  |  | Riemann method for solution of Linear equation |
|  |  | Examples |
|  |  |  |
|  |  |  |
| HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti) |  |  |
| SUNDAY - 24.01.2021 |  |  |
| 13 | $\begin{gathered} \text { January } \\ (25)(27-30) \end{gathered}$ | Monges method |
|  |  | Monges method of integration |
|  |  | Examples |
|  |  | Examples |
|  |  |  |
| HOLIDAY - 26.01.2021 (Republic Day) |  |  |
| SUNDAY - 31.01.2021 |  |  |
| 14 | February(01-06) | Characterstic equation and characterstic curves |
|  |  | Cauchy problems for second order differential equation |
|  |  | Examples |
|  |  | Examples |
|  |  | class discussion |
|  |  |  |
| SUNDAY - 07.02.2021 |  |  |
| 15 | February(08-13) | Method of seperation of variables |
|  |  | Wave equation |
|  |  | Heat equation |
|  |  | Examples |
|  |  | Examples |
|  |  |  |
| SUNDAY - 14.02.2021 |  |  |
| 16 | February$(15-20)$ | Method of seperation of variables laplace equation |
|  |  | Examples |
|  |  | Examples |
|  |  | Revision |
|  |  | Revision |
|  |  | Revision |

Name of Assistant Lecturer : Ms. Meenu Kalra
Class : B.Sc. II
Semester
Subject
: Semester-3
: Mathematics
Paper
: Statics(BM-233)
From October 2020 to February 2021

## Week 1

KVA DAV College for Women, Karnal

| $\begin{aligned} & \text { Week1,Day2 } \\ & \text { 06/10/2020 } \end{aligned}$ | Forces acting at a point |
| :---: | :---: |
| $\begin{aligned} & \hline \text { Week1,Day3 } \\ & \text { 07/10/2020 } \end{aligned}$ | Resultant and its components,Magnitude and direction of its resultant. |
| Week1,Day 4 $08 / 10 / 2020$ 08/10/2020 | Resolved parts of a force |
| Week1,Day5 09/10/2020 | Questions |
| $\begin{aligned} & \text { Week1,Day6 } \\ & \text { 10/10/2020 } \end{aligned}$ | Triangle law of vectors |
| Week2 |  |
| Week2,Day1 <br> 12/10/2020 | Lamda-mew theorem |
| $\begin{aligned} & \text { Week2,Day2 } \\ & \text { 13/10/2020 } \\ & \hline \end{aligned}$ | Lami's theorem |
| $\begin{aligned} & \text { Week2,Day3 } \\ & \text { 14/10/2020 } \end{aligned}$ | Questions based on lami's theorem |
| $\begin{aligned} & \text { Week2,Day4 } \\ & \text { 15/10/2020 } \end{aligned}$ | Conditions of equilibrium of concurrent forces |
| Week2,Day5 16/10/2020 | Revision |
| $\begin{aligned} & \text { Week2,Day6 } \\ & \text { 17/10/2020 } \\ & \hline \end{aligned}$ | Maharaja Agarsain Jayanti |
| Week 3 | Equilibrium of bodies placed on asmooth inclined planes |
| $\begin{gathered} \text { Week3,Day1 } \\ \text { 19/10/2020 } \end{gathered}$ | Parallel forces: <br> Resultant of two like and two unlike parallel forces acting on a rigid body. |
| $\begin{aligned} & \hline \text { Week3,Day2 } \\ & \text { 20/10/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week3,Day } 3 \\ & \text { 21/10/2020 } \end{aligned}$ | Questions |
| Week3,Day4 22/10/2020 | Problems |
| Week3,Day5 <br> 23/10/2020 | Continued.... |
| $\begin{aligned} & \text { Week3,Day6 } \\ & \text { 24/10/2020 } \end{aligned}$ | Revision |
| Week 4 |  |
| Week4,Day1 26/10/2020 | Analogue of lami's theorem |
| $\begin{aligned} & \text { Week4,Day2 } \\ & \text { 27/10/2020 } \end{aligned}$ | Questions based on analogue of lami's theorem |
| $\begin{aligned} & \text { Week4,Day3 } \\ & \text { 28/10/2020 } \end{aligned}$ | Continued.... |
| $\begin{aligned} & \text { Week4,Day4 } \\ & \text { 29/10/2020 } \\ & \hline \end{aligned}$ | Continued... |
| $\begin{aligned} & \text { Week4,Day5 } \\ & 30 / 10 / 2020 \end{aligned}$ | Introduction to moments |

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| $\begin{aligned} & \text { Week4,Day6 } \\ & \text { 31/10/2020 } \end{aligned}$ | Valmiki Jayanti |
| :---: | :---: |
| Week 5 |  |
| Week5,Day1 2/11/2020 | Definition of moments |
| $\begin{aligned} & \text { Week5,Day2 } \\ & \text { 3/11/2020 } \\ & \hline \end{aligned}$ | Varignon's theorem -when the forces acting at a point |
| $\begin{aligned} & \text { Week5,Day3 } \\ & \text { 4/11/2020 } \\ & \hline \end{aligned}$ | When the forces are parallel |
| $\begin{aligned} & \text { Week5,Day4 } \\ & \text { 5/11/2020 } \end{aligned}$ | Moment of force about a line |
| Week5,Day5 6/11/2020 | Continued... |
| Week5,Day6 7/11/2020 | Questions based on moments |
| Week 6 |  |
| Week6,Day1 $9 / 11 / 2020$ | Introduction to Couples |
| $\begin{aligned} & \text { Week6,Day2 } \\ & \text { 10/11/2020 } \end{aligned}$ | Moment of a couple,Sign of a moment of a couple |
| Week6,Day3 11/11/2020 | Continued..... |
| $\begin{aligned} & \text { Week6,Day4 } \\ & \text { 12/11/2020 } \end{aligned}$ | Equilibrium of two couples |
| $\begin{aligned} & \text { Week6,Day5 } \\ & \text { 13/11/2020 } \end{aligned}$ | Continued... |
| Week6,Day6 14/11/2020 | Diwali |
| Week 7 |  |
| $\begin{aligned} & \text { Week7,Day1 } \\ & \text { 16/11/2020 } \end{aligned}$ | Analytical conditions of equilibrium of coplanar forces: Equilibrium of three forces acting at a point |
| $\begin{aligned} & \text { Week7,Day2 } \\ & \text { 17/11/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week7,Day3 } \\ & \text { 18/11/2020 } \end{aligned}$ | Continued.... |
| $\begin{aligned} & \text { Week7,Day4 } \\ & \text { 19/11/2020 } \end{aligned}$ | Trignometrical theorems |
| $\begin{aligned} & \text { Week7,Day5 } \\ & \text { 20/11/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \hline \text { Week7,Day6 } \\ & \text { 21/11/2020 } \\ & \hline \end{aligned}$ | Questions |
| Week 8 |  |
| $\begin{aligned} & \text { Week8,Day1 } \\ & \text { 23/11/2020 } \end{aligned}$ | Continued.... |
| $\begin{aligned} & \hline \text { Week8,Day2 } \\ & \text { 24/11/2020 } \end{aligned}$ | Revision |
| $\begin{aligned} & \text { Week8,Day3 } \\ & \text { 25/11/2020 } \end{aligned}$ | Conditions of equilibrium of any no. of coplanar forces |

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| Week8,Day4 $26 / 11 / 2020$ | Questions |
| :---: | :---: |
| Week8,Day5 27/11/2020 | Friction:Introduction |
| Week8,Day6 28/11/2020 | Continued.... |
| Week 9 |  |
| $\begin{aligned} & \text { Week9,Day1 } \\ & 30 / 11 / 2020 \\ & \hline \end{aligned}$ | Guru Nanak Jayanti |
| $\begin{aligned} & \hline \text { Week9,Day2 } \\ & \text { 1/12/2020 } \\ & \hline \end{aligned}$ | Force of friction, coefficient of friction |
| $\begin{aligned} & \text { Week9,Day3 } \\ & \text { 2/12/2020 } \\ & \hline \end{aligned}$ | Angle and cone of friction |
| Week9,Day4 $3 / 12 / 2020$ | Questions |
| Week9,Day5 4/12/2020 | Continued..... |
| Week9,Day6 $5 / 12 / 2020$ | Problems on equilibrium of rods and ladders |
| Week 10 |  |
| Week10,Day1 30/11/2020 | Continued.... |
| $\begin{aligned} & \text { Week10,Day2 } \\ & \text { 1/12/2020 } \end{aligned}$ | Centre of gravity: <br> C.G. of a uniform rods,C.G. of uniform lamina in form a parallelogram |
| $\begin{aligned} & \hline \text { Week10,Day3 } \\ & \text { 2/12/2020 } \\ & \hline \end{aligned}$ | Questions.... |
| Week10,Day4 $3 / 12 / 2020$ | C.G. of a thin uniform triangular lamina |
| $\begin{aligned} & \text { Week10,Day5 } \\ & \text { 4/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week10,Day6 } \\ & \text { 5/12/2020 } \end{aligned}$ | C.G. of right circular solid cone |
| Week 11 |  |
| Week11,Day1 7/12/2020 | Questions |
| Week11,Day2 8/12/2020 | Virtual work: |
| Week11,Day3 9/12/2020 | Principle of virtual work |
| $\begin{aligned} & \text { Week11,Day4 } \\ & \text { 10/12/2020 } \end{aligned}$ | Questions |
| Week11,Day5 $11 / 12 / 2020$ | Forces which may be omitted in forming the equation of virtual work |
| $\begin{aligned} & \text { Week11,Day6 } \\ & \text { 12/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| Week 12 |  |
| Week12,Day1 $14 / 12 / 2020$ | Continued |

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| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 15/12/2020 } \end{aligned}$ | Forces in three dimensions: |
| :---: | :---: |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 16/12/2020 } \\ & \hline \end{aligned}$ | Parralleloppied law of forces |
| Week12,Day1 17/12/2020 | Questions |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 18/12/2020 } \\ & \hline \end{aligned}$ | Axis of couple |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 19/12/2020 } \end{aligned}$ | Conditions of equilibrium of a rigid body |
| Week 13 |  |
| Week13,Day1 21/12/2020 | Questions |
| $\begin{aligned} & \text { Week13,Day2 } \\ & \text { 22/12/2020 } \\ & \hline \end{aligned}$ | Continued |
| Week13,Day3 $23 / 12 / 2020$ | Poinsot's central axis |
| Week13,Day4 $24 / 12 / 2020$ | Questions |
| Week13,Day5 $25 / 12 / 2020$ | Christmas Day |
| $\begin{aligned} & \text { Week13,Day6 } \\ & \text { 26/12/2020 } \\ & \hline \end{aligned}$ | Condition in order that a general system of forces in space reduce to a single force |
| Week 14 |  |
| Week14,Day1 $28 / 12 / 2020$ | Questions |
| Week14,Day2 $29 / 12 / 2020$ | Questions |
| Week14,Day3 $30 / 12 / 2020$ | Continued |
| Week14,Day4 31/12/2020 | Equation of central axis |
| $\begin{aligned} & \text { Week14,Day5 } \\ & 1 / 1 / 2021 \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week14,Day6 } \\ & \text { 2/1/2021 } \end{aligned}$ | Questions |
| Week 15 |  |
| Week15,Day1 04/01/2021 | Continued |
| Week15,Day2 05/01/2021 | Class test |
| Week15,Day3 06/01/2021 | Introduction to wrenches |
| Week15,Day4 07/01/2021 | Resultant wrench of two given wrenches |
| Week15,Day5 08/01/2021 | Questions |
| Week15,Day6 09/01/2021 | Questions |

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| Week 16 |  |
| :--- | :--- |
| Week16,Day1 11/01/2021 | Find the locus of the central axis,if pitches are given |
| Week16,Day2 12/01/2021 | Questions |
| Week16,Day 3 | Questions |
| 13/01/2021 |  |
| Week16,Day4 14/01/2021 | Continued |
| Week16,Day5 15/01/2021 | Problems |
| Week16,Day6 16/01/2021 | Cl;ass test |
| Week 17 |  |
| Week17,Day1 18/01/2021 | Wrench resolved into two wrenches whose axis intersect at right angles in an infinite no. |
| of ways. |  |
| Week17,Day2 19/01/2021 | Questions |
| Week17,Day3 20/01/2021 | Guru Gobind Singh Jayanti |
| Week17,Day4 21/01/2021 | Questions |
| Week17,Day5 22/01/2021 | Continued |
| Week17,Day6 23/01/2021 | Revision |
| Week 18 |  |
| Week18,Day1 25/01/2021 | Introduction to Null lines and null planes |
| Week18,Day2 26/01/2021 | Republic Day |
| Week18,Day3 27/01/2021 | Questions based on null lines |
| Week18,Day4 28/01/2021 | Questions based on Null planes |
| Week18,Day5 29/01/2021 | Problems |
| Week18,Day6 30/01/2021 | Find null point of the plane for the system of forces |
| Week 19 |  |
| Week19,Day1 01/02/2021 | Questions |
| Week19,Day2 02/02/2021 | Questions |
| Week19,Day3 03/02/2021 | Find the condition that straight line may be a null line |
| Week19,Day4 04/02/2021 | Questions |
| Week19,Day5 05/02/2021 | Questions |
| Week19,Day6 06/02/2021 | Revision |
| Week 20 |  |
| Week20,Day1 08/02/2021 | Stable,Unstable and neutral equilibrium |
| Week20,Day2 09/02/2021 | Conditions of stability of equilibrium |
| Week20,Day3 10/02/2021 | Questions |
| Week20,Day4 11/02/2021 | Revision |
| Week20,Day5 12/02/2021 | Revision |
| Week20,Day6 13/02/2021 | Revision |
|  |  |


| Name of Assistant Lecturer | $:$ | Ms. Meenu Kalra |
| :--- | :--- | :--- |
| Class | $:$ | B.Sc. III |
| Semester | $:$ | Semester V |
| Subject | $:$ | Mathematics |
| Paper | $:$ | Numerical Analysis |
| From October 2020 to February 2021 |  |  |


| Week 1 |  |
| :---: | :---: |
| $\begin{aligned} & \text { Week1,Day2 } \\ & \text { 06/10/2020 } \end{aligned}$ | Introduction to Finite Difference operators. |
| $\begin{aligned} & \hline \text { Week1,Day3 } \\ & 07 / 10 / 2020 \end{aligned}$ | Properties of finite difference operators. |
| $\begin{aligned} & \text { Week1,Day } 4 \\ & 08 / 10 / 2020 \end{aligned}$ | Relations based on finite difference operators. |
| $\begin{aligned} & \text { Week1,Day5 } \\ & \text { 09/10/2020 } \end{aligned}$ | Questions based on it. |
| $\begin{aligned} & \text { Week1,Day6 } \\ & \text { 10/10/2020 } \end{aligned}$ | Finding the missing terms and effect of errors in a difference tabular values |
| Week2 |  |
| $\begin{aligned} & \text { Week2,Day } \\ & 1 \\ & 12 / 10 / 2020 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week2,Day2 } \\ & \text { 13/10/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \hline \text { Week2,Day3 } \\ & \text { 14/10/2020 } \\ & \hline \end{aligned}$ | Introduction:Interpolation with equal intervals |
| $\begin{aligned} & \text { Week2,Day4 } \\ & \text { 15/10/2020 } \end{aligned}$ | Questions based on it |
| $\begin{aligned} & \text { Week2,Day5 } \\ & \text { 16/10/2020 } \end{aligned}$ | Introduction to Newton's Forward interpolation formula |
| $\begin{aligned} & \text { Week2,Day6 } \\ & \text { 17/10/2020 } \\ & \hline \end{aligned}$ | Maharaja Agarsain Jayanti |
| Week 3 |  |
| $\begin{aligned} & \text { Week3,Day1 } \\ & \text { 19/10/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week3,Day2 } \\ & \text { 20/10/2020 } \end{aligned}$ | Introduction to Newton's backward interpolation formula |
| Week3,Day 3 21/10/2020 | Questions |
| $\begin{aligned} & \text { Week3,Day4 } \\ & \text { 22/10/2020 } \end{aligned}$ | Introduction to unequal intervals |
| Week3,Day5 $23 / 10 / 2020$ | Newton's Divided Difference |
| $\begin{aligned} & \hline \text { Week3,Day6 } \\ & \text { 24/10/2020 } \\ & \hline \end{aligned}$ | Questions |

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| Week 4 |  |
| :---: | :---: |
| $\begin{aligned} & \hline \text { Week4,Day1 } \\ & 26 / 10 / 2020 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week4,Day2 } \\ & 27 / 10 / 2020 \\ & \hline \end{aligned}$ | Revision |
| $\begin{aligned} & \text { Week4,Day3 } \\ & \text { 28/10/2020 } \end{aligned}$ | Lagrange's interpolation formulae |
| $\begin{aligned} & \hline \text { Week4,Day4 } \\ & \text { 29/10/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week4,Day5 } \\ & \text { 30/10/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week4,Day6 } \\ & \text { 31/10/2020 } \\ & \hline \end{aligned}$ | Valmiki Jayanti |
| Week 5 |  |
| Week5,Day1 2/11/2020 | Hermite's formulae |
| $\begin{aligned} & \text { Week5,Day2 } \\ & 3 / 11 / 2020 \\ & \hline \end{aligned}$ | Questions |
| Week5,Day3 $4 / 11 / 2020$ | Questions |
| Week5,Day4 5/11/2020 | Introduction to Central difference operator |
| $\begin{aligned} & \text { Week5,Day5 } \\ & 6 / 11 / 2020 \end{aligned}$ | Questions |
| Week5,Day6 $7 / 11 / 2020$ | Questions |
| Week 6 |  |
| Week6,Day1 $9 / 11 / 2020$ | Gauss forward interpolation formula |
| $\begin{aligned} & \text { Week6,Day2 } \\ & \text { 10/11/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week6,Day3 } \\ & \text { 11/11/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week6,Day4 } \\ & \text { 12/11/2020 } \\ & \hline \end{aligned}$ | Gauss backward interpolation formula |
| Week6,Day5 13/11/2020 | Questions |
| $\begin{aligned} & \text { Week6,Day6 } \\ & \text { 14/11/2020 } \end{aligned}$ | Diwali |
| Week 7 |  |
| $\begin{aligned} & \text { Week7,Day1 } \\ & \text { 16/11/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week7,Day2 } \\ & \text { 17/11/2020 } \\ & \hline \end{aligned}$ | Introduction to Sterling formula |
| $\begin{aligned} & \text { Week7,Day3 } \\ & \text { 18/11/2020 } \end{aligned}$ | Questions based on sterling's formula |
| $\begin{aligned} & \text { Week7,Day4 } \\ & \text { 19/11/2020 } \end{aligned}$ | Continued.. |
| $\begin{aligned} & \text { Week7,Day5 } \\ & \text { 20/11/2020 } \\ & \hline \end{aligned}$ | Introduction to Bessel's formula |

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| $\begin{aligned} & \hline \text { Week7,Day6 } \\ & \text { 21/11/2020 } \\ & \hline \end{aligned}$ | Questions based on Bessel's formula |
| :---: | :---: |
| Week 8 |  |
| $\begin{aligned} & \text { Week8,Day1 } \\ & \text { 23/11/2020 } \end{aligned}$ | Continued.. |
| $\begin{aligned} & \text { Week8,Day2 } \\ & \text { 24/11/2020 } \end{aligned}$ | Revision |
| $\begin{aligned} & \text { Week8,Day3 } \\ & \text { 25/11/2020 } \end{aligned}$ | Practicals: <br> Program tyo demonstrate Newton's Forward interpolation formula |
| Week8,Day4 $26 / 11 / 2020$ | Program to demonstrate Newton's Backward interpolation formula |
| $\begin{aligned} & \hline \text { Week8,Day5 } \\ & \text { 27/11/2020 } \\ & \hline \end{aligned}$ | Programe to demonstrate Lagrange's interpolation formulae |
| $\begin{aligned} & \text { Week8,Day6 } \\ & \text { 28/11/2020 } \end{aligned}$ | Continued.. |
| Week 9 |  |
| $\begin{aligned} & \hline \text { Week9,Day1 } \\ & \mathbf{3 0 / 1 1 / 2 0 2 0} \\ & \hline \end{aligned}$ | Guru Nanak Jayanti |
| $\begin{aligned} & \text { Week9,Day2 } \\ & \text { 1/12/2020 } \end{aligned}$ | Introduction to Numerical Differentation |
| $\begin{aligned} & \text { Week9,Day3 } \\ & \text { 2/12/2020 } \\ & \hline \end{aligned}$ | Derivative of a function using interpolation formulae |
| Week9,Day4 $3 / 12 / 2020$ | Questions |
| Week9,Day5 4/12/2020 | Questions |
| Week9,Day6 $5 / 12 / 2020$ | Probability Distribution of random variable. |
| Week 10 |  |
| $\begin{aligned} & \text { Week10,Day1 } \\ & 30 / 11 / 2020 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week10,Day2 } \\ & 1 / 12 / 2020 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week10,Day3 } \\ & \text { 2/12/2020 } \\ & \hline \end{aligned}$ | Class test |
| $\begin{aligned} & \text { Week10,Day4 } \\ & \text { 3/12/2020 } \end{aligned}$ | Binomial Distribution |
| $\begin{aligned} & \text { Week10,Day5 } \\ & \text { 4/12/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week10,Day6 } \\ & 5 / 12 / 2020 \\ & \hline \end{aligned}$ | Questions |
| Week 11 |  |
| $\begin{aligned} & \text { Week11,Day1 } \\ & \text { 7/12/2020 } \\ & \hline \end{aligned}$ | Student problems |

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| $\begin{aligned} & \text { Week11,Day2 } \\ & \text { 8/12/2020 } \\ & \hline \end{aligned}$ | Poisson's distribution |
| :---: | :---: |
| $\begin{aligned} & \text { Week11,Day3 } \\ & \text { 9/12/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week11,Day4 } \\ & \text { 10/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week11,Day5 } \\ & \text { 11/12/2020 } \end{aligned}$ | Normal distribution |
| $\begin{aligned} & \text { Week11,Day6 } \\ & \text { 12/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| Week 12 |  |
| Week12,Day1 $14 / 12 / 2020$ | Questions |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 15/12/2020 } \\ & \hline \end{aligned}$ | Mean variance and fitting |
| $\begin{aligned} & \hline \text { Week12,Day1 } \\ & 16 / 12 / 2020 \\ & \hline \end{aligned}$ | Questions based on it |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 17/12/2020 } \\ & \hline \end{aligned}$ | Introduction to eigen values problems |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 18/12/2020 } \\ & \hline \end{aligned}$ | Eigen values problems and its questions |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 19/12/2020 } \end{aligned}$ | Power method |
| Week 13 |  |
| $\begin{aligned} & \hline \text { Week13,Day1 } \\ & \text { 21/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week13,Day2 } \\ & \text { 22/12/2020 } \\ & \hline \end{aligned}$ | Jacobi's method |
| $\begin{aligned} & \text { Week13,Day3 } \\ & \text { 23/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week13,Day4 } \\ & \text { 24/12/2020 } \\ & \hline \end{aligned}$ | Given's method |
| $\begin{aligned} & \text { Week13,Day5 } \\ & 25 / 12 / 2020 \\ & \hline \end{aligned}$ | Christmas Day |
| $\begin{aligned} & \hline \text { Week13,Day6 } \\ & \text { 26/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| Week 14 |  |
| $\begin{aligned} & \hline \text { Week14,Day1 } \\ & \text { 28/12/2020 } \\ & \hline \end{aligned}$ | House holder's method and its questions |
| $\begin{aligned} & \text { Week14,Day2 } \\ & 29 / 12 / 2020 \\ & \hline \end{aligned}$ | QR Method and its questions |
| $\begin{aligned} & \hline \text { Week14,Day3 } \\ & 30 / 12 / 2020 \\ & \hline \end{aligned}$ | Lanczo's method and its questions |
| Week14,Day4 $31 / 12 / 2020$ | Student problems |
| $\begin{aligned} & \text { Week14,Day5 } \\ & \text { 1/1/2021 } \end{aligned}$ |  |

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| $\begin{aligned} & \hline \text { Week14,Day6 } \\ & \text { 2/1/2021 } \\ & \hline \end{aligned}$ | Numerical integration |
| :---: | :---: |
| Week 15 | Newton cote's Quardature formula and Questions |
| $\begin{aligned} & \text { Week15,Da } \\ & \text { y1 } \\ & 04 / 01 / 2021 \end{aligned}$ | Trapezoidal Rule and Questions |
| $\begin{aligned} & \text { Week15,Day2 } \\ & \text { 05/01/2021 } \end{aligned}$ | Simpson's one-third and three eighth rule. |
| $\begin{aligned} & \text { Week15,Da } \\ & \text { y3 } \\ & 06 / 01 / 2021 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week15,Day4 } \\ & \text { 07/01/2021 } \end{aligned}$ | Chebyshev formula and its questions |
| $\begin{aligned} & \text { Week15,Day5 } \\ & \text { 08/01/2021 } \\ & \hline \end{aligned}$ | Gauss Quadrature formula |
| $\begin{aligned} & \text { Week15,Day6 } \\ & \text { 09/01/2021 } \\ & \hline \end{aligned}$ | Questions |
| Week 16 |  |
| $\begin{aligned} & \hline \text { Week16,Day1 } \\ & \text { 11/01/2021 } \\ & \hline \end{aligned}$ | Numerical solution of Ordinary Differential equations |
| $\begin{aligned} & \text { Week16,Day2 } \\ & \text { 12/01/2021 } \\ & \hline \end{aligned}$ | Single step method:-Picard's method |
| $\begin{aligned} & \text { Week16,Day } 3 \\ & \text { 13/01/2021 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week16,Day4 } \\ & \text { 14/01/2021 } \\ & \hline \end{aligned}$ | Taylor's method and its questions |
| $\begin{aligned} & \text { Week16,Day5 } \\ & \text { 15/01/2021 } \\ & \hline \end{aligned}$ | Euler's method and its questions |
| $\begin{aligned} & \text { Week16,Day6 } \\ & \text { 16/01/2021 } \\ & \hline \end{aligned}$ | Runga-kutta method and its questions |
| Week 17 |  |
| $\begin{aligned} & \hline \text { Week17,Day1 } \\ & \text { 18/01/2021 } \\ & \hline \end{aligned}$ | Questions based on it |
| $\begin{aligned} & \text { Week17,Day2 } \\ & \text { 19/01/2021 } \end{aligned}$ | Revision |
| $\begin{aligned} & \text { Week17,Day3 } \\ & \text { 20/01/2021 } \\ & \hline \end{aligned}$ | Guru Gobind Singh Jayanti |
| $\begin{aligned} & \text { Week17,Day4 } \\ & \text { 21/01/2021 } \\ & \hline \end{aligned}$ | Introduction to multistep method: Predictor-corrector method |
| $\begin{aligned} & \text { Week17,Day5 } \\ & \text { 22/01/2021 } \\ & \hline \end{aligned}$ | Questions based on it |
| $\begin{aligned} & \text { Week17,Day6 } \\ & \text { 23/01/2021 } \\ & \hline \end{aligned}$ | Taylor's series method |
| Week 18 |  |
| $\begin{aligned} & \hline \text { Week18,Day1 } \\ & \text { 25/01/2021 } \\ & \hline \end{aligned}$ | Questions bvased on Taylor's series |
| $\begin{aligned} & \text { Week18,Day2 } \\ & \text { 26/01/2021 } \\ & \hline \end{aligned}$ | Republic Day |
| $\begin{aligned} & \text { Week18,Day3 } \\ & \text { 27/01/2021 } \\ & \hline \end{aligned}$ | Euler's method |

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| $\begin{aligned} & \hline \text { Week18,Day4 } \\ & \text { 28/01/2021 } \\ & \hline \end{aligned}$ | Questions |
| :---: | :---: |
| $\begin{aligned} & \text { Week18,Day5 } \\ & \text { 29/01/2021 } \\ & \hline \end{aligned}$ | Runga-Kutta Method |
| $\begin{aligned} & \text { Week18,Day6 } \\ & \text { 30/01/2021 } \\ & \hline \end{aligned}$ | Questions |
| Week 19 |  |
| $\begin{aligned} & \text { Week19,Day1 } \\ & \text { 01/02/2021 } \\ & \hline \end{aligned}$ | Multistep method |
| $\begin{aligned} & \text { Week19,Day2 } \\ & \text { 02/02/2021 } \\ & \hline \end{aligned}$ | Predictor-corrector method and questions |
| $\begin{aligned} & \text { Week19,Day3 } \\ & \text { 03/02/2021 } \\ & \hline \end{aligned}$ | Modified Euler's method and questions |
| $\begin{aligned} & \text { Week19,Day4 } \\ & \text { 04/02/2021 } \\ & \hline \end{aligned}$ | Milne's Simpson's method and questions |
| $\begin{aligned} & \text { Week19,Day5 } \\ & \text { 05/02/2021 } \\ & \hline \end{aligned}$ | Practicals: <br> Program to demonstrate Trapezoidal Rule |
| $\begin{aligned} & \hline \text { Week19,Day6 } \\ & \text { 06/02/2021 } \\ & \hline \end{aligned}$ | Program to demonstrate Simpson's one-third and three-eight rule |
| Week 20 |  |
| $\begin{aligned} & \text { Week20,Day2 } \\ & \text { 09/02/2021 } \end{aligned}$ | Program to demonstrate Euler's method |
| $\begin{aligned} & \text { Week20,Day3 } \\ & \text { 10/02/2021 } \\ & \hline \end{aligned}$ | Program to demonstrate Euler's modified method |
| $\begin{aligned} & \text { Week20,Day4 } \\ & \text { 11/02/2021 } \\ & \hline \end{aligned}$ | Program to demonsrate Runga-Kutta Method |
| $\begin{aligned} & \text { Week20,Day5 } \\ & \text { 12/02/2021 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week20,Day6 } \\ & \text { 13/02/2021 } \\ & \hline \end{aligned}$ | Questions |


| Name of Assistant Lecturer | $:$ Ms. SILKY |
| :--- | :--- |
| Class | $:$ BBA-I |
| Semester | $:$ I |
| Subject | : MATHS |
| Paper | : BBA-104 |
| From DECEMBER 2020 to February 2021 |  |


| Week 1 |  |
| :--- | :--- |
| Week1,Day1 8/12/2020 | Set theory: representation of sets,Types of sets. |
| Week1,Day2 9/12/2020 | Different operations on a set,venn diagrams. |
| Week1,Day3 10/12/2020 | Practical application of sets. |

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| $\begin{array}{\|l} \hline \text { Week1,Day4 } \\ 11 / 12 / 2020 \\ \hline \end{array}$ | Discuss examples and exercises. |
| :---: | :---: |
| Week1,Day5 12/12/2020 | Continued. |
| Week 2 |  |
| Week2,Day1 14/12/2020 | Logical statements and truth tables:introduction |
| $\begin{aligned} & \text { Week2,Day2 } \\ & 15 / 12 / 2020 \end{aligned}$ | Truth tables,compound statements. |
| Week2,Day3 16/12/2020 | Conjunction,disjunction,logical equivalence. |
| $\begin{aligned} & \text { Week2,Day4 } \\ & 17 / 12 / 2020 \end{aligned}$ | Laws of logic,conditional statements. |
| Week2,Day5 18/12/2020 | Quantifiers with examples and exercises. |
| Week2,Day6 19/12/2020 | Continued with results. |
| Week 3 |  |
| Week3,Day1 21/12/2020 | Linear and quadratic equations:degree of an equation,roots of an equation. |
| Week3,Day2 22/12/2020 | Simultaneous linear equations, linear laws of demand and supply equations. |
| $\begin{aligned} & \text { Week3,Day3 } \\ & 23 / 12 / 2020 \end{aligned}$ | Market equilibrium,methods of solving a quadratic equation. |
| Week3,Day4 24/12/2020 | Continued with examples. |
| $\begin{aligned} & \text { Week3,Day5 } \\ & 25 / 12 / 2020 \end{aligned}$ | Christmas Day |
| Week3,Day6 26/12/2020 | Continued with exercises. |
| Week 4 |  |
| Week4,Day1 28/12/2020 | Permutations and combinations :factorial ,permutation, permutation with repitions. |
| $\begin{aligned} & \text { Week4,Day2 } \\ & \text { 29/12/2020 } \end{aligned}$ | Circular permutations. |
| Week4,Day3 30/12/2020 | Circular combinations. |
| $\begin{aligned} & \text { Week4,Day4 } \\ & 31 / 12 / 2020 \\ & \hline \end{aligned}$ | Practical problems on permutations. |
| $\begin{aligned} & \text { Week4,Day5 } \\ & \text { 1/1/2021 } \end{aligned}$ | Practical problems on combinations. |
| $\begin{aligned} & \hline \text { Week4,Day6 } \\ & 2 / 1 / 2021 \end{aligned}$ | Continued with examples and exercises. |
| Week 5 |  |
| $\begin{aligned} & \hline \text { Week5,Day1 } \\ & \text { 04/01/2021 } \\ & \hline \end{aligned}$ | Binomial theorems:binomial theorem for a positive integral index. |

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| Week5,Day2 05/01/2021 | Determination of a particular term from end. |
| :---: | :---: |
| Week5,Day3 | Middle terms in a binomial expansion. |
| 06/01/2021 |  |
| Week5,Day4 07/01/2021 | Application of binomial theorem. |
| Week5,Day5 08/01/2021 | Continued with examples. |
| Week5,Day6 09/01/2021 | Continued with exercises. |
| Week 6 |  |
| Week6,Day1 11/01/2021 | Limits and continuity;functions,limit of a function, infinite limits,evaluation of limits. |
| Week6,Day2 12/01/2021 | Continuity of a function. |
| $\begin{aligned} & \text { Week6,Day } 3 \\ & 13 / 01 / 2021 \end{aligned}$ | Algebra of continuous functions. |
| Week6,Day4 14/01/2021 | Continued continuous functions with examples and exercises. |
| Week6,Day5 15/01/2021 | Revision and tests. |
| Week6,Day6 16/01/2021 | Revision and tests. |
| Week 7 |  |
| Week7,Day1 18/01/2021 | Differential calculus:derivative of a function. |
| Week7,Day2 19/01/2021 | First principle |
| Week7,Day3 20/01/2021 | Guru Gobind Singh Jayanti |
| Week7,Day4 21/01/2021 | Product rule |
| Week7,Day5 22/01/2021 | Quotient rule |
| Week7,Day6 23/01/2021 | Chain rule |
| Week 8 |  |
| Week8,Day1 25/01/2021 | Differentiation of a logarithmic and exponential function. |
| Week8,Day2 26/01/2021 | Republic Day |
| Week8,Day3 27/01/2021 | Derivatives of higher order. |
| Week8,Day4 28/01/2021 | Maxima and minima of a function. |
| Week8,Day5 29/01/2021 | Discuss about examples and exercises. |
| Week8,Day6 30/01/2021 | Continued differentiation. |
| Week 9 |  |
| Week9,Day1 01/02/2021 | Matrices:meaning and elementary operations on matrices. |
| Week9,Day2 02/02/2021 | Inverse of a matrix. |
| Week9,Day3 03/02/2021 | Solution to linear equations (based on payroll, wages and commission)using crammer rule |
| Week9,Day4 04/02/2021 | Discuss about examples and exercises. |
| Week9,Day5 05/02/2021 | Solution to linear equations using matrix inversion method. |
| Week9,Day6 06/02/2021 | Continued matrices. |
| Week 10 |  |
| Week10,Day1 08/02/2021 | Revisions and tests. |
| Week10,Day2 09/02/2021 |  |
| Week10,Day3 10/02/2021 |  |
| Week10,Day4 11/02/2021 |  |
| Week10,Day5 12/02/2021 |  |
| Week10,Day6 13/02/2021 | Sessional:differentiation,matrices,solution to linear equations. |

Weekly Lesson Plan (Odd Semester)
Name of the Paper:- Business Mathematics
( Ist Semester)
CLASS : B.COM. - I Year

Name of the Teacher : Ms. Meenu Kalra

| WEEK | DATE | TOPICS |
| :---: | :---: | :---: |
| 1 | November$(16-21)$ | Sequences and types of sequence |
|  |  | Arithmetic Progression (A.P) and related examples |
|  |  | Representation of terms in A.P and examples |
|  |  | Sum of ' $n$ ' terms of an A.P and examples |
|  |  | Arithmetic Means |
|  |  | Geometric Progressions (G.P) |
| SUNDAY - 22.11.2020 |  |  |
| 2 | November(23-28) | Examples |
|  |  | Sum of first ' n ' terms of G.P |
|  |  | Examples |
|  |  | Sum of a G.P upto infinity |
|  |  | Geometric means |
|  |  | Examples |
| SUNDAY - 29.11.2020 |  |  |
| HOLIDAY - 30.11.2020 (Guru Nanak Dev Jayanti) |  |  |
| 3 | December(1-5) | Applications of A.P and G.P to business Mathematics |
|  |  | Algebra of Matrices |
|  |  | examples |
|  |  | Basic operations on Matrices |
|  |  | Multiplication of Matrices |
| SUNDAY - 06.12.2020 |  |  |
| 4 | December(07-12) | Positive integral power of Matrices |
|  |  | Transpose of a matrix |
|  |  | Examples |
|  |  | Determinants |
|  |  | Minors and cofactors |
|  |  | Properties of determinants |
| SUNDAY - 13.12.2020 |  |  |
| 5 | December(14-19) | Examples |
|  |  | Examples |
|  |  | Examples |
|  |  | Adjoint of a matrix |
|  |  | Inverse of a square Matrix |
|  |  | Examples |
| SUNDAY - 20.12.2020 |  |  |

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| 6 | $\begin{gathered} \text { December } \\ (21-24)(26) \end{gathered}$ | Examples |
| :---: | :---: | :---: |
|  |  | Inverse of a matrix using Elementry operations |
|  |  | Solution of system of equations by using Cramer's Rule |
|  |  | Solution of system of linear equations using Matrices |
|  |  | Applications of matrix in particular problems |
| HOLIDAY - 25.12.2020 (Christmas) |  |  |
| SUNDAY - 27.12.2020 |  |  |
| 7 | December (28-31) <br> January (1-2) | Compound interest |
|  |  | simple interest and related examples |
|  |  | General Formula for determination of compound interest |
|  |  | Examples |
|  |  | Examples |
|  |  | Examples |
| SUNDAY - 03.01.2021 |  |  |
| 8 | January(4-9) | Examples |
|  |  | Continuous Compounding of interest |
|  |  | Problem on effective rate of interest |
|  |  | Examples |
|  |  | Differentiation |
|  |  | Derivative using first principle |
| SUNDAY - 10.01.2021 |  |  |
| 9 | January(11-16) | General theorems on Differentiation |
|  |  | Differentiation of products of two functions |
|  |  | Differentiation using chain rule method |
|  |  | Examples |
|  |  | Differentiation of logarithmic and exponential functions |
|  |  | Examples |
| SUNDAY - 17.01.2021 |  |  |
| 10 | $\begin{gathered} \text { January } \\ (18-19) 21-23) \end{gathered}$ | Logarithmic differentiation |
|  |  | Examples |
|  |  | Differentiation of parametric functions |
|  |  | Derivative of higher order |
|  |  | Examples |
| HOLIDAY - 20.01.2021 (Guru Gobind Singh Jayanti) |  |  |
| SUNDAY - 24.01.2021 |  |  |
| 11 | $\begin{gathered} \text { January } \\ (25)(27-30) \end{gathered}$ | Maxima and Minima |
|  |  | Examples |
|  |  | Second derivative test for finding local maxima and minima |
|  |  | Examples |
|  |  | Absolute Maxima and Absolute Minima |
| HOLIDAY - 26.01.2021 (Republic Day) |  |  |
| SUNDAY - 31.01.2021 |  |  |

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| 12 | February(01-06) | Problems on maxima and minima |
| :---: | :---: | :---: |
|  |  | Examples |
|  |  | Examples |
|  |  | Optimization of Economic functions |
|  |  | Examples |
|  |  | Examples |
| SUNDAY - 07.02.2021 |  |  |
| 13 | February(08-13) | Logarithms |
|  |  | Examples |
|  |  | Product and quotient formula for logarithms |
|  |  | Examples |
|  |  | Two systems of logarithms |
|  |  | Tables of logarithms |
| SUNDAY - 14.02.2021 |  |  |
| 14 | February$(15-20)$ | Annuity and related examples |
|  |  | Present value of an annuity and examples |
|  |  | Solutions of particular problems related to annuities |
|  |  | Examples |
|  |  | Examples |
|  |  | Problem Discussion |


| Name of Assistant Lecturer | $:$ Ms.SILKY |
| :--- | :--- |
| Class | $:$ BCA-I |
| Semester | $:$ I |
| Subject | $:$ MATHS |
| Paper | $:$ MATHEMATICAL FOUNDATIONS-I |

From DECEMBER 2020 to February 2021

| Week 1 |  |
| :--- | :--- |
| Week1,Day1 8/12/2020 | Sets: introduction. |
| Week1,Day2 9/12/2020 | Subsets and operations on sets,venn diagram of sets. |
| Week1,Day3 10/12/2020 | Power set of a set.Equivalence relation on a set and partition of a <br> set. |
| Week1,Day4 <br> 11/12/2020 | Permutation and combinations. |
| Week1,Day5 12/12/2020 | Discuss permutations with examples. |
| Week 2 |  |

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| Week2,Day1 14/12/2020 | Discuss combinations with examples. |
| :---: | :---: |
| $\begin{aligned} & \text { Week2,Day2 } \\ & \text { 15/12/2020 } \end{aligned}$ | Continued with examples and exercises. |
| Week2,Day3 16/12/2020 | Continued with examples and exercises. |
| $\begin{aligned} & \text { Week2,Day4 } \\ & \text { 17/12/2020 } \end{aligned}$ | Partially ordered sets. |
| Week2,Day5 18/12/2020 | Lattices(definition and examples) |
| Week2,Day6 19/12/2020 | Boolean algebra(definition and examples) |
| Week 3 |  |
| Week3,Day1 21/12/2020 | Epsilon and delta function of the continuity of a function of a single variable. |
| Week3,Day2 22/12/2020 | Basic properties of limits, continuous functions and classification of discontinuities. |
| $\begin{array}{\|l\|} \hline \text { Week3,Day3 } \\ \text { 23/12/2020 } \\ \hline \end{array}$ | Continued with examples. |
| Week3,Day4 24/12/2020 | Continued with exercises. |
| $\begin{aligned} & \hline \text { Week3,Day5 } \\ & \text { 25/12/2020 } \end{aligned}$ | Christmas Day |
| Week3,Day6 26/12/2020 | Derivative of a function. |
| Week 4 | Discuss examples with exercises. |
| Week4,Day1 28/12/2020 | Derivatives of logarithmic,exponential,trignometrical functions. |
| $\begin{aligned} & \text { Week4,Day2 } \\ & \text { 29/12/2020 } \\ & \hline \end{aligned}$ | Derivatives of inverse trigonometrical functions. |
| Week4,Day3 30/12/2020 | Derivatives of hyperbolic functions. |
| Week4,Day4 <br> 31/12/2020 | Higher order derivatives. |
| $\begin{aligned} & \text { Week4,Day5 } \\ & \text { 1/1/2021 } \end{aligned}$ | Formation of differential equations. |
| $\begin{aligned} & \hline \text { Week4,Day6 } \\ & \text { 2/1/2021 } \\ & \hline \end{aligned}$ | Discuss about examples and exercises. |
| Week 5 |  |
| Week5,Day1 <br> 04/01/2021 | Order and degree of differential equation. |
| Week5,Day2 05/01/2021 | Discuss about examples. |
| Week5,Day3 <br> 06/01/2021 | Geometrical approach to the existence of the solution of the differential equation $d y / d x=f(x, y)$ |
| Week5,Day4 07/01/2021 | Discuss about examples. |
| Week5,Day5 08/01/2021 | Continued with exercises. |

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| Week5,Day6 09/01/2021 | Continued with exercises. |
| :--- | :--- |
| Week 6 |  |
| Week6,Day1 11/01/2021 | Test on the topic :differentiation. |
| Week6,Day2 12/01/2021 | Test on the topic:differential equations. |
| Week6,Day 3 <br> 13/01/2021 | Assignment given on topic:relation on a set and partion of a set. |
| Week6,Day4 14/01/2021 | Revision and tests. |
| Week6,Day5 15/01/2021 | Revision and tests. |
| Week6,Day6 16/01/2021 | Revision and tests. |
| Week 7 |  |
| Week7,Day1 18/01/2021 | Ordinary differential equations. |
| Week7,Day2 19/01/2021 | Differential equations of first order and first degree. |
| Week7,Day3 20/01/2021 | Guru Gobind Singh Jayanti |
| Week7,Day4 21/01/2021 | Discuss about examples and exercises. |
| Week7,Day5 22/01/2021 | Exact differential equations. |
| Week7,Day6 23/01/2021 | Discuss about examples and exercises. |
| Week 8 |  |
| Week8,Day1 25/01/2021 | Continued examples. |
| Week8,Day2 26/01/2021 | Republic Day |
| Week8,Day3 27/01/2021 | Linear differential equations of higher order with constant <br> coefficients. |
| Week8,Day4 28/01/2021 | Continued with examples and exercises. |
| Week8,Day5 29/01/2021 | Continued with examples and exercises. |
| Week8,Day6 30/01/2021 | Homogeneous linear differential equations with examples. |
| Week 9 |  |
| Week9,Day1 01/02/2021 | Continued with examples. |
| Week9,Day2 02/02/2021 | Linear differential equations reducible to homogeneous differential <br> equations. |
| Week9,Day3 03/02/2021 | Continued examples. |
| Week9,Day4 04/02/2021 | Continued with exercises. |
| Week9,Day5 05/02/2021 | Application of differential equations to geometry. |
| Week9,Day6 06/02/2021 | Discuss examples. |
| Week 10 |  |
| Week10,Day1 08/02/2021 |  |
| Week10,Day3 10/02/2021 | Revision and tests. |
| Week10,Day4 11/02/2021 |  |
| Week5 12/02/2021 |  |
| 13/02/2021 |  |

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| Name of Assistant Lecturer | $:$ | Ms. Meenu Kalra |
| :--- | :--- | :--- | :--- |
| Class | $:$ | B.C.A. II |
| Semester | $:$ | Semester-IIII |
| Subject | $:$ | Mathematics |
| Paper | $:$ | ComputerOreinted Numerical Methods |
| From October 2020 to February 2021 |  |  |


| Week 1 |  |
| :---: | :---: |
| $\begin{aligned} & \text { Week1,Day2 } \\ & \text { 06/10/2020 } \end{aligned}$ | Iterative Method |
| $\begin{aligned} & \text { Week1,Day3 } \\ & 07 / 10 / 2020 \end{aligned}$ | Bisection Method |
| $\begin{aligned} & \text { Week1,Day } 4 \\ & \text { 08/10/2020 } \end{aligned}$ | False Position |
| $\begin{aligned} & \text { Week1,Day5 } \\ & \text { 09/10/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week1,Day6 } \\ & \text { 10/10/2020 } \end{aligned}$ | Newton-Raphson Method |
| Week2 |  |
| $\begin{aligned} & \text { Week2,Day1 } \\ & \text { 12/10/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week2,Day2 } \\ & \text { 13/10/2020 } \end{aligned}$ | Iteration method |
| $\begin{aligned} & \text { Week2,Day3 } \\ & \text { 14/10/2020 } \\ & \hline \end{aligned}$ | Discussion of convergence |
| $\begin{aligned} & \hline \text { Week2,Day4 } \\ & \text { 15/10/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \hline \text { Week2,Day5 } \\ & \text { 16/10/2020 } \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week2,Day6 } \\ & \text { 17/10/2020 } \\ & \hline \end{aligned}$ | Maharaja Agarsain Jayanti |
| Week 3 |  |
| $\begin{aligned} & \hline \text { Week3,Day1 } \\ & \text { 19/10/2020 } \\ & \hline \end{aligned}$ | Class Test |
| $\begin{aligned} & \text { Week3,Day2 } \\ & \text { 20/10/2020 } \end{aligned}$ | Bairstow's method |
| Week3,Day 3 <br> 21/10/2020 | Continued... |
| $\begin{aligned} & \text { Week3,Day4 } \\ & \text { 22/10/2020 } \\ & \hline \end{aligned}$ | Continued.... |
| Week3,Day5 23/10/2020 | Computer Arithmetic: Floating-point representation of numbers |
| $\begin{aligned} & \text { Week3,Day6 } \\ & \text { 24/10/2020 } \end{aligned}$ | Arithmetic operations with normalized floating point numbers |
| Week 4 |  |

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| $\begin{aligned} & \text { Week4,Day1 } \\ & \text { 26/10/2020 } \end{aligned}$ | Consequences of floating point numbers |
| :---: | :---: |
| $\begin{aligned} & \text { Week4,Day2 } \\ & 27 / 10 / 2020 \end{aligned}$ | Significant figures |
| $\begin{aligned} & \text { Week4,Day3 } \\ & \text { 28/10/2020 } \end{aligned}$ | Error in number representation inherent error, truncation error |
| $\begin{aligned} & \hline \text { Week4,Day4 } \\ & \text { 29/10/2020 } \\ & \hline \end{aligned}$ | Absolute error |
| $\begin{aligned} & \hline \text { Week4,Day5 } \\ & 30 / 10 / 2020 \\ & \hline \end{aligned}$ | Relative error |
| $\begin{aligned} & \text { Week4,Day6 } \\ & \text { 31/10/2020 } \end{aligned}$ | Valmiki Jayanti |
| Week 5 |  |
| Week5,Day1 $2 / 11 / 2020$ | Percentage error |
| $\begin{aligned} & \hline \text { Week5,Day2 } \\ & 3 / 11 / 2020 \\ & \hline \end{aligned}$ | Round off error |
| Week5,Day3 $4 / 11 / 2020$ | Questions |
| $\begin{aligned} & \text { Week5,Day4 } \\ & 5 / 11 / 2020 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week5,Day5 } \\ & 6 / 11 / 2020 \end{aligned}$ | Continued |
| Week5,Day6 $7 / 11 / 2020$ | Gauss-Elimination methods |
| Week 6 |  |
| $\begin{aligned} & \hline \text { Week6,Day1 } \\ & 9 / 11 / 2020 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \hline \text { Week6,Day2 } \\ & \text { 10/11/2020 } \\ & \hline \end{aligned}$ | Continued |
| $\begin{aligned} & \text { Week6,Day3 } \\ & \text { 11/11/2020 } \\ & \hline \end{aligned}$ | Pivoting |
| Week6,Day4 12/11/2020 | III-conditioned equations |
| $\begin{aligned} & \text { Week6,Day5 } \\ & \text { 13/11/2020 } \\ & \hline \end{aligned}$ | Refinement of solution,Gauss-Seidal iterative method |
| $\begin{aligned} & \hline \text { Week6,Day6 } \\ & \text { 14/11/2020 } \\ & \hline \end{aligned}$ | Diwali |
| Week 7 |  |
| $\begin{aligned} & \hline \text { Week7,Day1 } \\ & \text { 16/11/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \hline \text { Week7,Day2 } \\ & \text { 17/11/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week7,Day3 } \\ & \text { 18/11/2020 } \end{aligned}$ | Continued |
| $\begin{aligned} & \text { Week7,Day4 } \\ & \text { 19/11/2020 } \end{aligned}$ | Gauss Elimination methods, Pivoting |
| $\begin{aligned} & \text { Week7,Day5 } \\ & \text { 20/11/2020 } \end{aligned}$ | III-Conditioned |
| Week7,Day6 | Questions |

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| 21/11/2020 |  |
| :---: | :---: |
|  |  |
| $\begin{aligned} & \hline \text { Week8,Day1 } \\ & \text { 23/11/2020 } \end{aligned}$ | Euler's method |
| Week8, 24/11/2020 | Euler modified method |
| Week8,Day3 | Taylor-series method |
| $\begin{aligned} & \text { Week8,Day4 } \\ & \text { 26/11/2020 } \end{aligned}$ | Questions |
| Week8,Day5 27/11/2020 | RungaKutta Methods |
| $\begin{aligned} & \text { Week8,Day6 } \\ & \text { 28/11/2020 } \\ & \hline \end{aligned}$ | Questions |
| Week 9 |  |
| $\begin{gathered} \hline \text { Week9,Day1 } \\ \text { 30/11/2020 } \\ \hline \end{gathered}$ | Guru Nanak Jayanti |
| $\begin{aligned} & \text { Week9,Day2 } \\ & \text { 1/12/2020 } \end{aligned}$ | Predictor-Corrector Methods |
| Week9,Day3 2/12/2020 | Questions |
| Week9,Day4 3/12/2020 | Interpolation and Approximations |
| Week9,Day5 4/12/2020 | Polynomial interpolation |
| Week9,Day6 $5 / 12 / 2020$ | Newton,Lagranges,Difference tables |
| Week 10 |  |
| Week10,Day1 30/11/2020 | Questions |
| $\begin{aligned} & \text { Week10,Day2 } \\ & \text { 1/12/2020 } \\ & \hline \end{aligned}$ | Approximation of functions by Taylor Series |
| Week10,Day3 2/12/2020 | Questions |
| Week10,Day4 $3 / 12 / 2020$ | Chebshevpolynomial:Firstkind,Second kind and their relations |
| Week10,Day5 $4 / 12 / 2020$ | Orthogonal properties |
| $\begin{aligned} & \text { Week10,Day6 } \\ & \text { 5/12/2020 } \end{aligned}$ | Questions |
| Week 11 |  |
| Week11,Day1 7/12/2020 | Numerical Differentiation and integration |
| Week11,Day2 8/12/2020 | Questions |
| Week11,Day3 9/12/2020 | Questions |
| Week11,Day4 10/12/2020 | Differential Equations |

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| $\begin{aligned} & \text { Week11,Day5 } \\ & \text { 11/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| :---: | :---: |
| $\begin{aligned} & \hline \text { Week11,Day6 } \\ & \text { 12/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| Week 12 |  |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 14/12/2020 } \\ & \hline \end{aligned}$ | Numerical Differentiation and integration |
| $\begin{aligned} & \text { Week12,Day1 } \\ & 15 / 12 / 2020 \\ & \hline \end{aligned}$ | Differentiation formulae |
| $\begin{aligned} & \hline \text { Week12,Day1 } \\ & 16 / 12 / 2020 \\ & \hline \end{aligned}$ | Based on polynomial fit,pitfalls in differentiation |
| $\begin{aligned} & \text { Week12,Day1 } \\ & 17 / 12 / 2020 \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 18/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week12,Day1 } \\ & \text { 19/12/2020 } \end{aligned}$ | Questions |
| Week 13 |  |
| $\begin{aligned} & \hline \text { Week13,Day1 } \\ & \text { 21/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \hline \text { Week13,Day2 } \\ & 22 / 12 / 2020 \\ & \hline \end{aligned}$ | Revision |
| $\begin{aligned} & \hline \text { Week13,Day3 } \\ & \text { 23/12/2020 } \\ & \hline \end{aligned}$ | Class Test |
| $\begin{aligned} & \hline \text { Week13,Day4 } \\ & \text { 24/12/2020 } \\ & \hline \end{aligned}$ | Student problems |
| $\begin{aligned} & \text { Week13,Day5 } \\ & \text { 25/12/2020 } \\ & \hline \end{aligned}$ | Christmas Day |
| $\begin{aligned} & \hline \text { Week13,Day6 } \\ & \text { 26/12/2020 } \\ & \hline \end{aligned}$ | Trapezoidal Rule |
| Week 14 |  |
| $\begin{aligned} & \text { Week14,Day1 } \\ & \text { 28/12/2020 } \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \text { Week14,Day2 } \\ & 29 / 12 / 2020 \\ & \hline \end{aligned}$ | Questions |
| $\begin{aligned} & \hline \text { Week14,Day3 } \\ & 30 / 12 / 2020 \\ & \hline \end{aligned}$ | Questions |
| Week14,Day4 $31 / 12 / 2020$ | Questions |
| $\begin{aligned} & \text { Week14,Day5 } \\ & 1 / 1 / 2021 \end{aligned}$ | Student Problems |
| $\begin{aligned} & \text { Week14,Day6 } \\ & \text { 2/1/2021 } \end{aligned}$ | Revision |
| Week 15 |  |


| Week15,Day1 <br> 04/01/2021 | Revision |
| :--- | :--- |
| Week15,Day2 05/01/2021 | Simpson Rules |
| Week15,Day3 | Questions |
| 06/01/2021 |  |
| Week15,Day4 07/01/2021 | Questions |
| Week15,Day5 08/01/2021 | Questions |
| Week15,Day6 09/01/2021 | Student Problems |
| Week 16 |  |
| Week16,Day1 11/01/2021 | Revision |
| Week16,Day2 12/01/2021 | Gaussian Quardature |
| Week16,Day 3 | Questions |
| 13/01/2021 |  |
| Week16,Day4 14/01/2021 | Questions |
| Week16,Day5 15/01/2021 | Student Problems |
| Week16,Day6 16/01/2021 | Continued... |
| Week 17 |  |
| Week17,Day1 18/01/2021 | Continued |
| Week17,Day2 19/01/2021 | Revision |
| Week17,Day3 20/01/2021 | Guru Gobind Singh Jayanti |
| Week17,Day4 21/01/2021 | Revision |
| Week17,Day5 22/01/2021 | Class Test |
| Week17,Day6 23/01/2021 | Trapezoidal Rule |
| Week 18 |  |
| Week20,Day6 13/02/2021 |  |
| Week18,Day1 25/01/2021 | Questions |
| Week18,Day2 26/01/2021 | Republic Day |
| Week18,Day3 27/01/2021 | Questions |
| Week18,Day4 28/01/2021 | Questions |
| Week18,Day5 29/01/2021 | Revision |
| Week20,Day1 08/02/2021 |  |
| Week 19 |  |
| Week6 30/01/2021 | Class Test |
| Week19,Day1 01/02/2021 | Simpsons Rules |
| Week19,Day2 02/02/2021 10/02/2021 |  |
| Weeekstions |  |
| Week19,Day3 03/02/2021 | Questions |
| Week19,Day5 05/02/2021 06/02/2021 | Gaussian Quardature |
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