# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR: Mrs. Priya

CLASS AND SECTION: M.Sc.- I$^{st}$ (Sem - II$^{nd}$)

SUBJECT: Advanced Complex Analysis

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | |
| 6-1-26 | |
| 7-1-26 | |
| 8-1-26 | Introduction of Integral fn's |
| 9-1-26 | factorization of Integral fn's |
| 10-1-26 | Weierstrass primary factors |
| **WEEK 2** | |
| 12-1-26 | |
| 13-1-26 | |
| 14-1-26 | |
| 15-1-26 | Weierstrass factorise thm |
| 16-1-26 | Gamma fn. & it's properties |
| 17-1-26 | Stirling formula, Integral Version of gamma fn's |
| **WEEK 3** | |
| 19-1-26 | |
| 20-1-26 | |
| 21-1-26 | |
| 22-1-26 | Problems |
| 24-1-26 | Riemann Zeta fn., Riemann functional eqn |
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| **WEEK 4** | |
| 27-1-26 | |
| 28-1-26 | |
| 29-1-26 | Revision. |
| 30-1-26 | Mittag-Leffler thm, Examples |
| 31-1-26 | Revision |
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| **WEEK 5** | |
| 2-2-26 | |
| 3-2-26 | |
| 4-2-26 | |
| 5-2-26 | Runge thm, Problems. |
| 6-2-26 | Test |
| 7-2-26 | Introduction of Analytic Continuation. |
| **WEEK 6** | |

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| 9-2-26 | |
| 10-2-26 | |
| 11-2-26 | Natural Boundary, Some examples |
| 13-2-26 | Uniqueness of direct analytic Continuation. |
| 14-2-26 | Uniqueness along a Curve. |
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| **WEEK 7** | |
| 16-2-26 | |
| 17-2-26 | |
| 18-2-26 | |
| 19-2-26 | Power series method of analytic Continuation. |
| 20-2-26 | Schwarz Reflection principle |
| 21-2-26 | Revision. |
| **WEEK 8** | |
| 23-2-26 | |
| 24-2-26 | |
| 25-2-26 | |
| 26-2-26 | Germ of an analytic ft; Monodromy thm. |
| 27-2-26 | Some examples |
| 28-2-26 | Harmonic ft's on disk, examples. |
| **WEEK 9** | |
| 9-3-26 | |
| 10-3-26 | |
| 11-3-26 | |
| 12-3-26 | Poisson Kernel |
| 13-3-26 | The Dirichlet problem for a section disc. |
| 14-3-26 | Day 1 class |
| **WEEK 10** | |
| 16-3-26 | |
| 17-3-26 | |
| 18-3-26 | |
| 19-3-26 | Introduction of Harnack inequality |
| 20-3-26 | Harnack thm. |
| 21-3-26 | Dirichlet region, Green ft. |
| **WEEK 11** | |

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| 24-3-26 | |
| 25-3-26 | |
| 27-3-26 | Canonical Product, Jensen formula |
| 28-3-26 | poisson-Jensen formula, examples. |
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| **WEEK 12** | |
| 30-3-26 | |
| 31-3-26 | |
| 1-4-26 | |
| 2-4-26 | Hadamard 3-circles thm |
| 3-4-26 | Growth & order of an entire ft. |

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| 4-4-26 | No. of zero's, Exponent of Convergence |
| **WEEK 13** | |
| 6-4-26 | |
| 7-4-26 | |
| 8-4-26 | |
| 9-4-26 | Borel thm, Hadamard factorization thm. |
| 10-4-26 | Test |
| 11-4-26 | Range of an analytic fn; Bloch thm. |
| **WEEK 14** | |
| 13-4-26 | |
| 15-4-26 | |
| 16-4-26 | · Schottky thm., examples. |
| 17-4-26 | Little Picard thm. |
| 18-4-26 | Montel / Caratheodory thm, Examples. |
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| **WEEK 15** | |
| 20-4-26 | |
| 21-4-26 | |
| 22-4-26 | |
| 23-4-26 | Great Picard thm, Bieberbach Conjecture. |
| 24-4-26 | Revision |
| 25-4-26 | Test |
| **WEEK 16** | |
| 27-4-26 | |
| 28-4-26 | |
| 29-4-26 | |
| 30-4-26 | 1/4 thm, Problems. |
| 1-5-26 | Doubt class |
| 2-5-26 | Test. |

**WEEK 17**

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| 4-5-26 |
| 5-5-26 |
| 6-5-26 |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR: Mimansha

CLASS AND SECTION: MSc 1st Yr. Maths

SUBJECT: Algebraic No. Th.

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | Introduction |
| 6-1-26 | Algebraic Number |
| 7-1-26 | Algebraic Integers |
| 8-1-26 | Gaussian Integers |
| 9-1-26 | Gaussian Integers Properties |
| 10-1-26 | Primes and Fundamental Theorem |
| **WEEK 2** | |
| 12-1-26 | Integers and Fundamental Theorem in $Q(w)$ |
| 13-1-26 | Algebraic Fields |
| 14-1-26 | Primitive Polynomials |
| 15-1-26 | General Quadratic Field Introduction |
| 16-1-26 | The General Quadratic Field $Q(\sqrt{m})$ |
| 17-1-26 | sections of $Q(\sqrt{2})$ |
| **WEEK 3** | |
| 19-1-26 | Fundamental Theorem |
| 20-1-26 | Fields in which Fundamental Theorem is false |
| 21-1-26 | Real Euclidean Fields |
| 22-1-26 | Complex Euclidean Fields |
| 24-1-26 | Gaussian Integers |
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| **WEEK 4** | |
| 27-1-26 | Fermat theorem in the ring of Gaussian Integers |
| 28-1-26 | Primes of $Q(\sqrt{2})$ Introduction |
| 29-1-26 | Doubt class |
| 30-1-26 | Primes of $Q(\sqrt{5})$ |
| 31-1-26 | Primes of $Q(\sqrt{2})$ and $Q(\sqrt{5})$ Revision class |
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| **WEEK 5** | |
| 2-2-26 | Algebraic Numbers |
| 3-2-26 | Countability |
| 4-2-26 | Countability of set of Algebraic Numbers |
| 5-2-26 | Liouville Theorem |
| 6-2-26 | Liouville Theorem and generalizations |
| 7-2-26 | Revision class |
| **WEEK 6** | |

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|---|---|
| 9-2-26 | Transcendental Numbers Introduction |
| 10-2-26 | Transcendental Numbers |
| 11-2-26 | Algebraic Number fields |
| 13-2-26 | Doubt class |
| 14-2-26 | Algebraic Number Fields Test |
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| **WEEK 7** | |
| 16-2-26 | Liouville Theorem |
| 17-2-26 | Liouville Theorem of Primitive elements |
| 18-2-26 | Doubt Class |
| 19-2-26 | Liouville Theorem Test |
| 20-2-26 | Revision Class |
| 21-2-26 | Introduction Ring of algebraic Integers |
| **WEEK 8** | |
| 23-2-26 | Ring of Algebraic Integers |
| 24-2-26 | Doubt class |
| 25-2-26 | Test of Ring of Algebraic Integers |
| 26-2-26 | Primitive Elements |
| 27-2-26 | Theorem of Primitive elements |
| 28-2-26 | Revision class |
| **WEEK 9** | |
| 9-3-26 | Norm of Algebraic Number |
| 10-3-26 | Trace of Algebraic Number |
| 11-3-26 | Bilinear Pairing |
| 12-3-26 | Non degeneracy of Bilinear Pairing |
| 13-3-26 | Internale Basis Introduction |
| 14-3-26 | Existence of an integral Basis |
| **WEEK 10** | |
| 16-3-26 | Algebraic Number Field |
| 17-3-26 | Discriminant of an algebraic NumerField |
| 18-3-26 | Ideals in the ring of algebraic integers |
| 19-3-26 | Revision class |
| 20-3-26 | Ideals in the ring of algebraic integers |
| 21-3-26 | Doubt class |
| **WEEK 11** | |
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| 24-3-26 | Explicit construction of integral basis |
| 25-3-26 | Discriminant |
| 27-3-26 | Sign of the discriminant |
| 28-3-26 | Introduction class of Cyclotomic fields |
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| **WEEK 12** | |
| 30-3-26 | Cyclotomic Fields |
| 31-3-26 | Quadratic Cases |
| 1-4-26 | Cubic Cases |
| 2-4-26 | Revision class |
| 3-4-26 | Calculation for quadratic and cubic cases |

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| 4-4-26 | Test |
| **WEEK 13** | |
| 6-4-26 | Introduction |
| 7-4-26 | Integral closure |
| 8-4-26 | Noetherian Ring |
| 9-4-26 | Characterizing Dedekind domains |
| 10-4-26 | Fractional Ideals |
| 11-4-26 | Revision class |
| **WEEK 14** | |
| 13-4-26 | Unique Factorization |
| 15-4-26 | G.C.D of ideals |
| 16-4-26 | L.C.M of ideals |
| 17-4-26 | Chinese Remainder Theorem |
| 18-4-26 | Dedekind Theorem |
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| **WEEK 15** | |
| 20-4-26 | Ramified extensions |
| 21-4-26 | Unramified extensions. |
| 22-4-26 | Revision of Algebraic Number Field |
| 23-4-26 | Different of an Algebraic Number Field |
| 24-4-26 | Doubt class |
| 25-4-26 | Revision of different of an Algebraic Number Field |
| **WEEK 16** | |
| 27-4-26 | Introduction ring of Algebraic Integers |
| 28-4-26 | Revision class |
| 29-4-26 | Factorization in the ring |
| 30-4-26 | Test |
| 1-5-26 | Factorization in the ring of algebraic integers |
| 2-5-26 | Revision class |

**WEEK 17**

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| 4-5-26 | Doubt class |
| 5-5-26 | Revision class |
| 6-5-26 | Doubt class |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..... Mimansha

CLASS AND SECTION ..... M.Sc. Ist Yr. Maths

SUBJECT ..... Operations Research Techniques

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | Introduction |
| 6-1-26 | Origin of Operation Research |
| 7-1-26 | Definition of Operation Research |
| 8-1-26 | Scope of Operation Research |
| 9-1-26 | Linear Programming |
| 10-1-26 | Formulation of Linear Programming |
| **WEEK 2** | |
| 12-1-26 | Solutions of Linear Programming Problems |
| 13-1-26 | Introduction to Methods |
| 14-1-26 | Graphical Method |
| 15-1-26 | Simplex Method |
| 16-1-26 | Revision of Methods. |
| 17-1-26 | Big-M Method |
| **WEEK 3** | |
| 19-1-26 | Two-phase Methods |
| 20-1-26 | Doubt class of Methods |
| 21-1-26 | Degeneracy |
| 22-1-26 | Revision class |
| 24-1-26 | Degeneracy |
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| **WEEK 4** | |
| 27-1-26 | Duality Introduction |
| 28-1-26 | Duality in Linear Programming |
| 29-1-26 | Doubt class |
| 30-1-26 | Duality in Linear Programming |
| 31-1-26 | Revision class |
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| **WEEK 5** | |
| 2-2-26 | Transportation Problems Introduction. |
| 3-2-26 | Transportation Problems |
| 4-2-26 | Basic feasible solutions |
| 5-2-26 | Introduction to Optimum solutions |
| 6-2-26 | Methods Intro |
| 7-2-26 | Stepping stone |
| **WEEK 6** | |

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| 9-2-26 | Modified distribution Methods |
| 10-2-26 | Unbalanced Problems |
| 11-2-26 | Degenerate Problems |
| 13-2-26 | Introduction to Transhipment Problems |
| 14-2-26 | Revision class |
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| **WEEK 7** | |
| 16-2-26 | Assignment Problems Introduction |
| 17-2-26 | Assignment Problems |
| 18-2-26 | Introduction to Methods |
| 19-2-26 | Hungarian Method |
| 20-2-26 | Unbalanced Problem |
| 21-2-26 | Case of Maximization |
| **WEEK 8** | |
| 23-2-26 | Revision class |
| 24-2-26 | Travelling salesman |
| 25-2-26 | Doubt Class for all Methods |
| 26-2-26 | Travelling Salesman Problem |
| 27-2-26 | Crew Assignment Problems |
| 28-2-26 | Test |
| **WEEK 9** | |
| 9-3-26 | Introduction |
| 10-3-26 | Stochastic Processes |
| 11-3-26 | Poisson Process |
| 12-3-26 | Birth-death Process |
| 13-3-26 | Revision class |
| 14-3-26 | Test |
| **WEEK 10** | |
| 16-3-26 | Queuing Models : Introduction |
| 17-3-26 | Basic Components of a Queuing System |
| 18-3-26 | Revision class |
| 19-3-26 | Markovian Queuing Models |
| 20-3-26 | Steady-state solution of Markovian Model |
| 21-3-26 | Markovian Model with single servers |
| **WEEK 11** | |
| 24-3-26 | Markovian Model with multiple servers |
| 25-3-26 | Markovian Model (M/M/1) |
| 27-3-26 | Markovian Model (M/M/C) |
| 28-3-26 | Markovian Model (M/M/1,K) |
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| **WEEK 12** | |
| 30-3-26 | Doubt class |
| 31-3-26 | Markovian Model (M/MC/K) |
| 1-4-26 | Revision class for Markovian Models |
| 2-4-26 | Markovian Model |
| 3-4-26 | Test |

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| 4-4-26 | Revision class |
| **WEEK 13** | |
| 6-4-26 | Introduction to Inventory Control Models |
| 7-4-26 | Inventory control Models |
| 8-4-26 | Economic Order Quantity (EOQ) |
| 9-4-26 | EOQ Model with uniform demand |
| 10-4-26 | EOQ when shortages are allowed. |
| 11-4-26 | EOQ with uniform replenishment |
| **WEEK 14** | |
| 13-4-26 | Inventory Control with price Breaks. |
| 15-4-26 | Revision class |
| 16-4-26 | Introduction to Game Theory |
| 17-4-26 | Two person zero sum game |
| 18-4-26 | saddle points definition |
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| **WEEK 15** | |
| 20-4-26 | Game with saddle points |
| 21-4-26 | The rule of dominance |
| 22-4-26 | Algebraic rule of dominance |
| 23-4-26 | Graphical rule of dominance. |
| 24-4-26 | Mixed strategy Games |
| 25-4-26 | solving Mixed strategy Games |
| **WEEK 16** | |
| 27-4-26 | Test |
| 28-4-26 | Linear programming Methods for Mixed games |
| 29-4-26 | Revision class |
| 30-4-26 | Linear programming |
| 1-5-26 | Mixed strategy games |
| 2-5-26 | Exercise for mixed strategy games |

**WEEK 17**

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|---|---|
| 4-5-26 | Doubt class |
| 5-5-26 | Revision class |
| 6-5-26 | Test |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR Mrs. Pooja

CLASS AND SECTION M.Sc. (Mathematics) II Sem

SUBJECT Measure and integration Theory

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | |
| 6-1-26 | |
| 7-1-26 | |
| 8-1-26 | Set functions: |
| 9-1-26 | intuitive idea of measure |
| 10-1-26 | Elementary properties of measure. |
| **WEEK 2** | |
| 12-1-26 | |
| 13-1-26 | |
| 14-1-26 | |
| 15-1-26 | Measurable set and their fundamental properties |
| 16-1-26 | Lebesgue measure set |
| 17-1-26 | " " of real numbers |
| **WEEK 3** | |
| 19-1-26 | |
| 20-1-26 | |
| 21-1-26 | Algebra of measurable sets |
| 22-1-26 | Borel set |
| 24-1-26 | Equivalent formulation of measurable set |
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| **WEEK 4** | |
| 27-1-26 | |
| 28-1-26 | |
| 29-1-26 | Measurable set in terms of open |
| 30-1-26 | closed $F_\sigma$ and $G_\delta$ sets |
| 31-1-26 | |
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| **WEEK 5** | |
| 2-2-26 | |
| 3-2-26 | |
| 4-2-26 | |
| 5-2-26 | Non measurable sets |
| 6-2-26 | " |
| 7-2-26 | Test |
| **WEEK 6** | |

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|---|---|
| 9-2-26 | |
| 10-2-26 | |
| 11-2-26 | Measurable function, equivalent formulations. |
| 13-2-26 | Properties of measurable functions. |
| 14-2-26 | |
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| **WEEK 7** | |
| 16-2-26 | |
| 17-2-26 | |
| 18-2-26 | |
| 19-2-26 | Approximation of a measurable function |
| 20-2-26 | " " sequence of simple functions |
| 21-2-26 | " " nearly continous functions |
| **WEEK 8** | |
| 23-2-26 | |
| 24-2-26 | |
| 25-2-26 | |
| 26-2-26 | Egoroff theorem. |
| 27-2-26 | Lusin theorem |
| 28-2-26 | convergence in measure |
| **WEEK 9** | |
| 9-3-26 | |
| 10-3-26 | |
| 11-3-26 | |
| 12-3-26 | F. Riez theorem |
| 13-3-26 | Almost uniform convergence. |
| 14-3-26 | |
| **WEEK 10** | |
| 16-3-26 | |
| 17-3-26 | |
| 18-3-26 | |
| 19-3-26 | Short comings of Riemann integral |
| 20-3-26 | Lebesgue of bounded function over a set |
| 21-3-26 | " " " finite measure |
| **WEEK 11** | |

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|---|---|
| 24-3-26 | |
| 25-3-26 | |
| 27-3-26 | Lebesgue integral as a generalization |
| 28-3-26 | " " " Reimann integral / fin |
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| **WEEK 12** | |
| 30-3-26 | |
| 31-3-26 | |
| 1-4-26 | |
| 2-4-26 | integral of non-negative functions |
| 3-4-26 | |

4-4-26
WEEK
6-4

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| 4-4-26 | Fatous Lemma |
| **WEEK 13** | |
| 6-4-26 | |
| 7-4-26 | |
| 8-4-26 | |
| 9-4-26 | Monotone convergence thm |
| 10-4-26 | General Lebesgue Integral |
| 11-4-26 | " convergence thm |
| **WEEK 14** | |
| 13-4-26 | |
| 15-4-26 | |
| 16-4-26 | Vitali covering lemma |
| 17-4-26 | Differentiation of monotonic functions |
| 18-4-26 | Function of bounded variation |
| | |
| **WEEK 15** | |
| 20-4-26 | |
| 21-4-26 | |
| 22-4-26 | |
| 23-4-26 | Difference of monotonic function |
| 24-4-26 | |
| 25-4-26 | Diff. of Test indefinite integral |
| **WEEK 16** | |
| 27-4-26 | |
| 28-4-26 | |
| 29-4-26 | ; |
| 30-4-26 | Fundamental thm |
| 1-5-26 | " " of Calculus |
| 2-5-26 | |

**WEEK 17**

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| 4-5-26 |
| 5-5-26 |
| 6-5-26 |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR Mrs. Pooja

CLASS AND SECTION M.Sc. (Mathematics) IInd Sem

SUBJECT Integral equation and calculation of variation

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | Linear integral equations. |
| 6-1-26 | Some basic identities |
| 7-1-26 | " |
| 8-1-26 | |
| 9-1-26 | |
| 10-1-26 | |
| **WEEK 2** | |
| 12-1-26 | Initial value problems reduced to Volterra integral eq$^n$ |
| 13-1-26 | " |
| 14-1-26 | Methods of Successive substitution |
| 15-1-26 | |
| 16-1-26 | |
| 17-1-26 | |
| **WEEK 3** | |
| 19-1-26 | Successive approximation to solve Volterr integral eq$^n$ |
| 20-1-26 | of Second kind |
| 21-1-26 | " |
| 22-1-26 | |
| 24-1-26 | |
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| **WEEK 4** | |
| 27-1-26 | Iterated kernels |
| 28-1-26 | Neumann Series for Volterra equations. |
| 29-1-26 | " |
| 30-1-26 | |
| 31-1-26 | |
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| **WEEK 5** | |
| 2-2-26 | Resolvent kernel as a Series. |
| 3-2-26 | |
| 4-2-26 | Laplace transform method. |
| 5-2-26 | |
| 6-2-26 | |
| 7-2-26 | |
| **WEEK 6** | |

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| 9-2-26 | Text |
| 10-2-26 | Volterra integral equations |
| 11-2-26 | |
| 13-2-26 | |
| 14-2-26 | |
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| **WEEK 7** | |
| 16-2-26 | Boundary value problems |
| 17-2-26 | Fredholm integral equations |
| 18-2-26 | " |
| 19-2-26 | |
| 20-2-26 | |
| 21-2-26 | |
| **WEEK 8** | |
| 23-2-26 | Methods of successive approximation |
| 24-2-26 | " " " Fredholm equation 2nd kind |
| 25-2-26 | " |
| 26-2-26 | |
| 27-2-26 | |
| 28-2-26 | |
| **WEEK 9** | |
| 9-3-26 | Iterated kernels and Neumann Series |
| 10-3-26 | " " Fredholm equations |
| 11-3-26 | Resolvent kernel as a sum of series. |
| 12-3-26 | |
| 13-3-26 | |
| 14-3-26 | |
| **WEEK 10** | |
| 16-3-26 | Fredholm resolvent " " as a ratio of two series |
| 17-3-26 | " Separable kernels |
| 18-3-26 | Approximation of kernal by a separable kernels. |
| 19-3-26 | |
| 20-3-26 | |
| 21-3-26 | |
| **WEEK 11** | |

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| 24-3-26 | Fredholm Alternative. |
| 25-3-26 | |
| 27-3-26 | |
| 28-3-26 | |
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| **WEEK 12** | |
| 30-3-26 | Non homogeneous Fredholm equation |
| 31-3-26 | Green Function |
| 1-4-26 | |
| 2-4-26 | |
| 3-4-26 | |

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| 4-4-26 | |
| **WEEK 13** | |
| 6-4-26 | Solution of a Volterra integral equation |
| 7-4-26 | Method of variation of parameters to construct of |
| 8-4-26 | " |
| 9-4-26 | |
| 10-4-26 | |
| 11-4-26 | |
| **WEEK 14** | |
| 13-4-26 | Basic four properties of the Green function |
| 15-4-26 | Hilbert - Schmidt theory |
| 16-4-26 | |
| 17-4-26 | |
| 18-4-26 | |
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| **WEEK 15** | |
| 20-4-26 | Motivating problems of calculus of variations. |
| 21-4-26 | Shortest distance |
| 22-4-26 | Minimum surface of revolution. |
| 23-4-26 | |
| 24-4-26 | |
| 25-4-26 | |
| **WEEK 16** | |
| 27-4-26 | Isoperimetric problem Geodesic. |
| 28-4-26 | Fundamental lemma of calculus of variations. |
| 29-4-26 | " |
| 30-4-26 | |
| 1-5-26 | |
| 2-5-26 | |

**WEEK 17**

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| 4-5-26 | Conditional extremum under geometric constraints |
| 5-5-26 | Test |
| 6-5-26 | " " " integral constraints |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..... Mrs. Priya .....

CLASS AND SECTION ..... M.Sc- IInd year (Sem- 4th) .....

SUBJECT ..... Viscous Fluid Dynamics .....

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | |
| 6-1-26 | |
| 7-1-26 | |
| 8-1-26 | |
| 9-1-26 | |
| 10-1-26 | |
| **WEEK 2** | |
| 12-1-26 | Introduction of Viscous fluid |
| 13-1-26 | Vorticity in two dimension |
| 14-1-26 | " |
| 15-1-26 | |
| 16-1-26 | |
| 17-1-26 | |
| **WEEK 3** | |
| 19-1-26 | Circular and rectilinear Vortices |
| 20-1-26 | Introduction of Vortex doublet, |
| 21-1-26 | Images of Vortex doublet. |
| 22-1-26 | |
| 24-1-26 | |
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| **WEEK 4** | |
| 27-1-26 | Motion due to Vortices, Single & Double vortices |
| 28-1-26 | Karman Vortex street. |
| 29-1-26 | Wave motion in a gas, speed of sound in a gas |
| 30-1-26 | |
| 31-1-26 | |
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| **WEEK 5** | |
| 2-2-26 | Eqn. of Motion of a gas, Subsonic, Sonic, |
| 3-2-26 | Supersonic Gas, Isentropic gas flow. |
| 4-2-26 | Flow through a nozzle. |
| 5-2-26 | |
| 6-2-26 | |
| 7-2-26 | |
| **WEEK 6** | |

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|---|---|
| 9-2-26 | Introduction of Stress Components. |
| 10-2-26 | Relation Between Cartesian Components. |
| 11-2-26 | Translational motion of fluid element. |
| 13-2-26 | |
| 14-2-26 | |
| | |
| **WEEK 7** | |
| 16-2-26 | Introduction of Rates of strain. |
| 17-2-26 | Transformation of rates of Strains. |
| 18-2-26 | Relation b/w Stress and rates of Strains. |
| 19-2-26 | |
| 20-2-26 | |
| 21-2-26 | |
| **WEEK 8** | |
| 23-2-26 | Revision |
| 24-2-26 | Test |
| 25-2-26 | The co-efficient of Viscosity, Laminar flow |
| 26-2-26 | |
| 27-2-26 | |
| 28-2-26 | |
| **WEEK 9** | |
| 9-3-26 | Newtonian and Non-Newtonian fluids. |
| 10-3-26 | Navier-Stoke eq$^{n}$. eq$^{n}$ in cylindrical & spherical |
| 11-3-26 | Diffusion of Vorticity. |
| 12-3-26 | |
| 13-3-26 | |
| 14-3-26 | |
| **WEEK 10** | |
| 16-3-26 | Plane poiseuille & Couette flow |
| 17-3-26 | Theory of lubrication, Hagen poiseuille flow, |
| 18-3-26 | Steady flow b/w. Co-axial circular Cylinders |
| 19-3-26 | |
| 20-3-26 | |
| 21-3-26 | |
| **WEEK 11** | |

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|---|---|
| 24-3-26 | Flow through tubes of uniform elliptic |
| 25-3-26 | Triangular Cross-Section, Unsteady flow over flat plane. |
| 27-3-26 | |
| 28-3-26 | |
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| **WEEK 12** | |
| 30-3-26 | Steady flow past a fixed sphere. |
| 31-3-26 | Flow in Convergent & divergent channels. |
| 1-4-26 | Introduction of Dynamical similarity. |
| 2-4-26 | |
| 3-4-26 | |

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| 4-4-26 | |
| **WEEK 13** | |
| 6-4-26 | Inspection analysis, Non-dimensional numbers. |
| 7-4-26 | Dimensional analysis, Buckingham $\Pi$-Thm. |
| 8-4-26 | Non-dimensional parameters. |
| 9-4-26 | |
| 10-4-26 | |
| 11-4-26 | |
| **WEEK 14** | |
| 13-4-26 | Prandtl boundary layer, |
| 15-4-26 | Boundary layer eq$^{n}$ in two-dimension. |
| 16-4-26 | Test. |
| 17-4-26 | |
| 18-4-26 | |
| | |
| **WEEK 15** | |
| 20-4-26 | Characteristic boundary layer dimension. |
| 21-4-26 | Karman integral Condition. |
| 22-4-26 | Revision. |
| 23-4-26 | |
| 24-4-26 | |
| 25-4-26 | |
| **WEEK 16** | |
| 27-4-26 | Karman-pohlhausen method. |
| 28-4-26 | Test |
| 29-4-26 | Revision |
| 30-4-26 | |
| 1-5-26 | |
| 2-5-26 | |

**WEEK 17**

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|---|---|
| 4-5-26 | Problems. |
| 5-5-26 | " |
| 6-5-26 | Test. |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..... Mimansha .....

CLASS AND SECTION ..... M.Sc. IInd Yr. Maths .....

SUBJECT Database Management System

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | Introduction |
| 6-1-26 | Terminologies of Database |
| 7-1-26 | Conventional File system |
| 8-1-26 | Drawbacks |
| 9-1-26 | Data Independence |
| 10-1-26 | Role and Functions |
| **WEEK 2** | |
| 12-1-26 | Data Administrator |
| 13-1-26 | Role and functions |
| 14-1-26 | Doubt class |
| 15-1-26 | Databases |
| 16-1-26 | characteristics of Databases |
| 17-1-26 | Data Redundancy |
| **WEEK 3** | |
| 19-1-26 | Revision class |
| 20-1-26 | Data Redundancy |
| 21-1-26 | Data Integrity |
| 22-1-26 | Data Independence |
| 24-1-26 | Revision class |
| | |
| **WEEK 4** | |
| 27-1-26 | DBMS |
| 28-1-26 | Functions of DBMS |
| 29-1-26 | Advantages of DBMS |
| 30-1-26 | disadvantages of DBMS |
| 31-1-26 | Revision class |
| | |
| **WEEK 5** | |
| 2-2-26 | Introduction of Architecture |
| 3-2-26 | Architecture |
| 4-2-26 | Levels of Architecture Introduction |
| 5-2-26 | Three levels of Architecture |
| 6-2-26 | Revision class |
| 7-2-26 | External Level |
| **WEEK 6** | |

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|---|---|
| 9-2-26 | External Level |
| 10-2-26 | Conceptual level |
| 11-2-26 | Internal Level |
| 13-2-26 | Revision of all three Levels |
| 14-2-26 | Doubt class |
| | |
| **WEEK 7** | |
| 16-2-26 | Mappings |
| 17-2-26 | schemas |
| 18-2-26 | Client Architecture |
| 19-2-26 | Server Architecture |
| 20-2-26 | Revision class |
| 21-2-26 | Test |
| **WEEK 8** | |
| 23-2-26 | Way of Processing |
| 24-2-26 | Revision class |
| 25-2-26 | Distributed processing |
| 26-2-26 | Doubt class |
| 27-2-26 | Revision of all Three Levels |
| 28-2-26 | Distributed processing Theory |
| **WEEK 9** | |
| 9-3-26 | Introduction to Data Model |
| 10-3-26 | Data Model |
| 11-3-26 | Relational Data Model |
| 12-3-26 | Hierarchical Data Model |
| 13-3-26 | Network Data Model |
| 14-3-26 | Revision of all Data Models. |
| **WEEK 10** | |
| 16-3-26 | Relational Model |
| 17-3-26 | Basic structure |
| 18-3-26 | Terminology |
| 19-3-26 | Normilization |
| 20-3-26 | Introduction to Normal Form |
| 21-3-26 | First Normal Form |
| **WEEK 11** | |
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|---|---|
| 24-3-26 | Second Normal Form |
| 25-3-26 | Third Normal Form |
| 27-3-26 | Revision of all Normal Forms |
| 28-3-26 | Doubt class |
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| **WEEK 12** | |
| 30-3-26 | BCNF Introduction |
| 31-3-26 | BCNF |
| 1-4-26 | Relational Algebra |
| 2-4-26 | Doubt class |
| 3-4-26 | Relational calculus |

4-4-26
WEEK
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|---|---|
| 4-4-26 | Test |
| **WEEK 13** | |
| 6-4-26 | PL/SQL Blocks |
| 7-4-26 | Data Types |
| 8-4-26 | PL/SQL Functions |
| 9-4-26 | Cursors |
| 10-4-26 | Error handling in PL/SQL |
| 11-4-26 | Package functions |
| **WEEK 14** | |
| 13-4-26 | Package Procedures |
| 15-4-26 | Revision class |
| 16-4-26 | Database Triggers |
| 17-4-26 | Use & Type of database Triggers |
| 18-4-26 | Database Triggers |
| | |
| **WEEK 15** | |
| 20-4-26 | Declarative Integrity constraints |
| 21-4-26 | Database Triggers V/S Declarative constraints |
| 22-4-26 | Creating a Trigger |
| 23-4-26 | Doubt class |
| 24-4-26 | BEFORE vs AFTER Trigger combinations |
| 25-4-26 | Revision class |
| **WEEK 16** | |
| 27-4-26 | Practical |
| 28-4-26 | Dropping a Trigger |
| 29-4-26 | Revision class |
| 30-4-26 | Terminologies revision |
| 1-5-26 | Practical |
| 2-5-26 | Doubt class |

**WEEK 17**

| | |
|---|---|
| 4-5-26 | Doubt class |
| 5-5-26 | Revision class |
| 6-5-26 | Doubt class |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR: Mrs. Rooja

CLASS AND SECTION: M.Sc. Mathematics 3rd Sem

SUBJECT: Partial Differential equations.

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | Method of Separation of variables |
| 6-1-26 | " |
| 7-1-26 | Boundary value Problems |
| 8-1-26 | |
| 9-1-26 | |
| 10-1-26 | |
| **WEEK 2** | |
| 12-1-26 | One dimensional heat equation. |
| 13-1-26 | Steady state temperature in a rectangular plate. |
| 14-1-26 | Circular disk. |
| 15-1-26 | |
| 16-1-26 | |
| 17-1-26 | |
| **WEEK 3** | |
| 19-1-26 | Semi-infinite plate. |
| 20-1-26 | The heat equation in semi-infinite |
| 21-1-26 | Solution of three dimensional Laplace eqⁿ |
| 22-1-26 | |
| 24-1-26 | |
| | |
| **WEEK 4** | |
| 27-1-26 | Heat equations |
| 28-1-26 | wave equations in cartesian, |
| 29-1-26 | cylindrical and spherical coordinates. |
| 30-1-26 | |
| 31-1-26 | |
| | |
| **WEEK 5** | |
| 2-2-26 | Method of separation of variables to Strings. |
| 3-2-26 | " |
| 4-2-26 | Test |
| 5-2-26 | |
| 6-2-26 | |
| 7-2-26 | |
| **WEEK 6** | |

| | |
|---|---|
| 9-2-26 | Introduction of partial differential equations |
| 10-2-26 | " |
| 11-2-26 | |
| 13-2-26 | |
| 14-2-26 | |
| | |
| **WEEK 7** | |
| 16-2-26 | Examples of PDE classification. |
| 17-2-26 | " |
| 18-2-26 | Transport equation |
| 19-2-26 | |
| 20-2-26 | |
| 21-2-26 | |
| **WEEK 8** | |
| 23-2-26 | Initial value problem |
| 24-2-26 | " |
| 25-2-26 | Non homogeneous equations. |
| 26-2-26 | |
| 27-2-26 | |
| 28-2-26 | |
| **WEEK 9** | |
| 9-3-26 | Introduction of Laplace equation. |
| 10-3-26 | Fundamental solution. |
| 11-3-26 | Mean value formula |
| 12-3-26 | |
| 13-3-26 | |
| 14-3-26 | |
| **WEEK 10** | |
| 16-3-26 | Test |
| 17-3-26 | Non-homogeneous equations. |
| 18-3-26 | " |
| 19-3-26 | |
| 20-3-26 | |
| 21-3-26 | |
| **WEEK 11** | |

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|---|---|
| 24-3-26 | Energy methods. |
| 25-3-26 | " |
| 27-3-26 | |
| 28-3-26 | |
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| | |
| **WEEK 12** | |
| 30-3-26 | Test |
| 31-3-26 | Introduction of non-linear PDE |
| 1-4-26 | " |
| 2-4-26 | |
| 3-4-26 | |

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|---|---|
| 4-4-26 | |
| **WEEK 13** | |
| 6-4-26 | 1st order PDE |
| 7-4-26 | Complete integrals |
| 8-4-26 | " |
| 9-4-26 | |
| 10-4-26 | |
| 11-4-26 | |
| **WEEK 14** | |
| 13-4-26 | Envelopes, |
| 15-4-26 | characteristics |
| 16-4-26 | |
| 17-4-26 | |
| 18-4-26 | |
| | |
| **WEEK 15** | |
| 20-4-26 | Hamilton, Jacobi equations. |
| 21-4-26 | calculus of variations, |
| 22-4-26 | " |
| 23-4-26 | |
| 24-4-26 | |
| 25-4-26 | |
| **WEEK 16** | |
| 27-4-26 | Hamilton ODE |
| 28-4-26 | " |
| 29-4-26 | Legendre transform |
| 30-4-26 | |
| 1-5-26 | |
| 2-5-26 | |

**WEEK 17**

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|---|---|
| 4-5-26 | Hopf-Lax formula |
| 5-5-26 | weak solutions. |
| 6-5-26 | |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ....Mrs. Raja.....

CLASS AND SECTION ....M.Sc. (Mathematics) 3rd Sem

SUBJECT ....Fuzzy Topology.....

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | |
| 6-1-26 | |
| 7-1-26 | . |
| 8-1-26 | Regular topological space |
| 9-1-26 | $T_3$ and $T_4$ separation axioms |
| 10-1-26 | . " |
| **WEEK 2** | |
| 12-1-26 | |
| 13-1-26 | |
| 14-1-26 | |
| 15-1-26 | Characterizations and basic properties |
| 16-1-26 | Urysohn lemma and Tietze extension thm |
| 17-1-26 | " |
| **WEEK 3** | |
| 19-1-26 | |
| 20-1-26 | |
| 21-1-26 | |
| 22-1-26 | Regularity and normality of compact |
| 24-1-26 | " " " Hausdorff space |
| | |
| **WEEK 4** | |
| 27-1-26 | |
| 28-1-26 | |
| 29-1-26 | Complete regularity |
| 30-1-26 | " normality |
| 31-1-26 | $T_{3\frac{1}{2}}$ and $T_5$ spaces |
| | |
| **WEEK 5** | |
| 2-2-26 | |
| 3-2-26 | |
| 4-2-26 | |
| 5-2-26 | Characterization and basic properties. |
| 6-2-26 | Product topological space |
| 7-2-26 | Projection mapping |
| **WEEK 6** | |

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|---|---|
| 9-2-26 | |
| 10-2-26 | |
| 11-2-26 | Tychnoff product topology in terms of Subbase its characterization |
| 13-2-26 | Separation axioms and product spaces. |
| 14-2-26 | |
| **WEEK 7** | |
| 16-2-26 | |
| 17-2-26 | |
| 18-2-26 | |
| 19-2-26 | connectedness, locally connectedness |
| 20-2-26 | Product space and first axiom space |
| 21-2-26 | Tychonoff product th |
| **WEEK 8** | |
| 23-2-26 | |
| 24-2-26 | |
| 25-2-26 | |
| 26-2-26 | Embedding and Metrization |
| 27-2-26 | Lemma and Tychonoff embedding th |
| 28-2-26 | Urysohn metrization th |
| **WEEK 9** | |
| 9-3-26 | |
| 10-3-26 | |
| 11-3-26 | |
| 12-3-26 | Nets in topological spaces |
| 13-3-26 | Convergence of nets |
| 14-3-26 | Hausdorffness and nets |
| **WEEK 10** | |
| 16-3-26 | |
| 17-3-26 | |
| 18-3-26 | |
| 19-3-26 | Subnet and cluster points |
| 20-3-26 | Compactness and nets |
| 21-3-26 | Filters: Defn and examples |
| **WEEK 11** | |

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|---|---|
| 24-3-26 | |
| 25-3-26 | |
| 27-3-26 | collection of all Filters |
| 28-3-26 | Method of generating filters and finer filters |
| | |
| **WEEK 12** | |
| 30-3-26 | |
| 31-3-26 | |
| 1-4-26 | Ultra filter and its characterizations |
| 2-4-26 | Filtrable image of filter |
| 3-4-26 | Canonical way to converting nets to filters |

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| 4-4-26 | Stone-Cech compactification |
| **WEEK 13** | |
| 6-4-26 | |
| 7-4-26 | |
| 8-4-26 | |
| 9-4-26 | Covering of a space |
| 10-4-26 | local finiteness, |
| 11-4-26 | paracompact space |
| **WEEK 14** | |
| 13-4-26 | |
| 15-4-26 | |
| 16-4-26 | Paracompactness and regular space |
| 17-4-26 | Michael's th$^{m}$ |
| 18-4-26 | characterization of paracompactness |
| | |
| **WEEK 15** | |
| 20-4-26 | |
| 21-4-26 | |
| 22-4-26 | |
| 23-4-26 | Paracompactness as normal space |
| 24-4-26 | |
| 25-4-26 | A. H. Stone's th$^{m}$ |
| **WEEK 16** | |
| 27-4-26 | |
| 28-4-26 | |
| 29-4-26 | Test |
| 30-4-26 | Nagata-Smirnov Metrization th$^{m}$ |
| 1-5-26 | |
| 2-5-26 | |

**WEEK 17**

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| 4-5-26 |
| 5-5-26 |
| 6-5-26 |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..... Dr. SONIA .....

CLASS AND SECTION ..... M.Sc Final yr. .....

SUBJECT ..... I.P.S & Measure Theory .....

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | Introduction of Hilbert spaces. |
| 6-1-26 | Inner product space |
| 7-1-26 | " |
| 8-1-26 | Hilbert spaces |
| 9-1-26 | Schwarz inequality |
| 10-1-26 | " |
| **WEEK 2** | |
| 12-1-26 | Hilbert space as N.L.S |
| 13-1-26 | " |
| 14-1-26 | " |
| 15-1-26 | Theorem based on Hilbert space |
| 16-1-26 | " |
| 17-1-26 | " |
| **WEEK 3** | |
| 19-1-26 | Convex sets in Hilbert spaces |
| 20-1-26 | " |
| 21-1-26 | " |
| 22-1-26 | Projection Theorem |
| 24-1-26 | " |
| | " |
| **WEEK 4** | |
| 27-1-26 | Theorems on Orthonormal sets |
| 28-1-26 | " |
| 29-1-26 | " |
| 30-1-26 | Separability. |
| 31-1-26 | Total orthonormal sets |
| | |
| **WEEK 5** | |
| 2-2-26 | Bessel Inequality |
| 3-2-26 | " |
| 4-2-26 | Parseval Identity |
| 5-2-26 | " |
| 6-2-26 | " |
| 7-2-26 | " |
| **WEEK 6** | |

| | |
|---|---|
| 9-2-26 | Theorem based on identity |
| 10-2-26 | " |
| 11-2-26 | " |
| 13-2-26 | Revision |
| 14-2-26 | " |
| | |
| **WEEK 7** | |
| 16-2-26 | Introduction of projection operators. |
| 17-2-26 | Product of projection |
| 18-2-26 | " |
| 19-2-26 | " |
| 20-2-26 | " |
| 21-2-26 | " |
| **WEEK 8** | |
| 23-2-26 | Conjugate of a Hilbert space |
| 24-2-26 | " |
| 25-2-26 | Th. based on conjugate of a Hilbert space |
| 26-2-26 | " |
| 27-2-26 | " |
| 28-2-26 | " |
| **WEEK 9** | |
| 9-3-26 | Riesz representation th. in Hilbert spaces |
| 10-3-26 | " |
| 11-3-26 | " |
| 12-3-26 | " |
| 13-3-26 | Adjoint of an operator |
| 14-3-26 | " |
| **WEEK 10** | |
| 16-3-26 | Theo- on Adjoint of an operator |
| 17-3-26 | " |
| 18-3-26 | " |
| 19-3-26 | Reflexivity of Hilbert space |
| 20-3-26 | " |
| 21-3-26 | " |
| **WEEK 11** | |

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|---|---|
| 24-3-26 | Self adjoint operators |
| 25-3-26 | " |
| 27-3-26 | " |
| 28-3-26 | " |
| | |
| | |
| **WEEK 12** | |
| 30-3-26 | Positive operators |
| 31-3-26 | " |
| 1-4-26 | Product of positive operators |
| 2-4-26 | " |
| 3-4-26 | " |

| | |
|---|---|
| 4-4-26 | Th. on Product of Positive operators. |
| **WEEK 13** | |
| 6-4-26 | Sum and diff of projections. |
| 7-4-26 | " |
| 8-4-26 | " |
| 9-4-26 | Normal and sectionary operators |
| 10-4-26 | " |
| 11-4-26 | " |
| **WEEK 14** | |
| 13-4-26 | Spectral theorem on F.D. Space. |
| 15-4-26 | " |
| 16-4-26 | Convex function. |
| 17-4-26 | Measure space. |
| 18-4-26 | Generalized Fatou Lemma. |
| | |
| **WEEK 15** | |
| 20-4-26 | Signed measure |
| 21-4-26 | Hahn decomposition theorem. |
| 22-4-26 | " |
| 23-4-26 | Jordan decomposition theorem. |
| 24-4-26 | Mutually Signed Measure. |
| 25-4-26 | Radon-Nikodyn Theorem |
| **WEEK 16** | |
| 27-4-26 | Lebesgue decomposition. |
| 28-4-26 | Lebesgue Stieltjes Integral. |
| 29-4-26 | Product Measure. |
| 30-4-26 | Fubini Theorem. |
| 1-5-26 | Baire Sets |
| 2-5-26 | " |

**WEEK 17**

| | |
|---|---|
| 4-5-26 | Revision |
| 5-5-26 | " |
| 6-5-26 | " |
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# TIKA RAM GIRLS COLLEGE SONEPAT

## Lesson Plan Format

NAME OF ASSISTANT/ASSOCIATE PROFESSOR ..Dr. Sonia.....

CLASS AND SECTION ..M.Sc. 4th Sem.....

SUBJECT ..Classical Mechanics.....

| WEEK 1 | DESCRIPTION |
|---|---|
| 5-1-26 | Introduction of moments and products of inertia. |
| 6-1-26 | Angular momentum of a rigid body |
| 7-1-26 | " |
| 8-1-26 | " |
| 9-1-26 | Principal axes and principal moment of inertia of a rigid body |
| 10-1-26 | " |
| **WEEK 2** | |
| 12-1-26 | Kinetic energy of rigid body rotating about a fixed pt. |
| 13-1-26 | " |
| 14-1-26 | " |
| 15-1-26 | Momental ellipsoid and equimomental system |
| 16-1-26 | " |
| 17-1-26 | " |
| **WEEK 3** | |
| 19-1-26 | Coplanar mass distribution |
| 20-1-26 | " |
| 21-1-26 | " |
| 22-1-26 | General motion of a rigid body |
| 24-1-26 | " |
| | |
| **WEEK 4** | |
| 27-1-26 | Revision of K.E of rigid body |
| 28-1-26 | " |
| 29-1-26 | " |
| 30-1-26 | Coplanar mass distribution - Article. |
| 31-1-26 | " |
| | |
| **WEEK 5** | |
| 2-2-26 | Free & constrained systems. |
| 3-2-26 | " |
| 4-2-26 | " |
| 5-2-26 | Constraints and their classification |
| 6-2-26 | " |
| 7-2-26 | " |
| **WEEK 6** | |

| | |
|---|---|
| 9-2-26 | Constraints & their classification |
| 10-2-26 | Holonomic and non-holonomic systems |
| 11-2-26 | " |
| 13-2-26 | " |
| 14-2-26 | Degree of freedom |
| | |
| **WEEK 7** | |
| 16-2-26 | Generalized Co-ordinates. |
| 17-2-26 | " |
| 18-2-26 | Virtual displacement & Virtual work. |
| 19-2-26 | " |
| 20-2-26 | " |
| 21-2-26 | |
| **WEEK 8** | |
| 23-2-26 | Principal of of Virtual work. |
| 24-2-26 | Possible Velocity & possible acceleration |
| 25-2-26 | Ideal Constraints |
| 26-2-26 | " |
| 27-2-26 | General eq$^{n}$ of dynamics for ideal constraints |
| 28-2-26 | " |
| **WEEK 9** | |
| 9-3-26 | Lagrange's eq$^{n}$ of second kind. |
| 10-3-26 | Generalized Velocities |
| 11-3-26 | Generalized accelerations |
| 12-3-26 | " |
| 13-3-26 | " |
| 14-3-26 | Uniqueness of solution |
| **WEEK 10** | |
| 16-3-26 | Variation for total energy for conservative fields |
| 17-3-26 | " |
| 18-3-26 | " |
| 19-3-26 | Lagrange Variables and Lagrangian fu$^{n}$ $(L(q_i, \dot{q}_i, t))$ |
| 20-3-26 | " |
| 21-3-26 | " |
| **WEEK 11** | |
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|---|---|
| 24-3-26 | Hamiltonian Variable & Hamiltonian fu$^{n}$. |
| 25-3-26 | Donkin theorem |
| 27-3-26 | Ignorable Co-ordinates |
| 28-3-26 | " |
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| **WEEK 12** | |
| 30-3-26 | Hamilton canonical eq$^{n}$'s. |
| 31-3-26 | " |
| 1-4-26 | Routh Variables & Routh fu$^{n}$. |
| 2-4-26 | " |
| 3-4-26 | Routh equation. |

4-4-26

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|---|---|
| 4-4-26 | Poincare Brackets. |
| **WEEK 13** | |
| 6-4-26 | Poisson identity |
| 7-4-26 | Jacobi - Poisson Theorem |
| 8-4-26 | " |
| 9-4-26 | " |
| 10-4-26 | " |
| 11-4-26 | principle of least action. |
| **WEEK 14** | |
| 13-4-26 | Canonical Transformation: |
| 15-4-26 | Necessary & Sufficient Condition for a canonical transformation |
| 16-4-26 | " |
| 17-4-26 | Univalent Canonical transformation |
| 18-4-26 | " |
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| **WEEK 15** | |
| 20-4-26 | Free Canonical transformation |
| 21-4-26 | Hamilton Jacobi equation |
| 22-4-26 | Jacobi Theorem |
| 23-4-26 | Method of seperation of Variables in H Function. |
| 24-4-26 | Routh equation. |
| 25-4-26 | Lagranges bracket. |
| **WEEK 16** | |
| 27-4-26 | Jacobian matrix of a canonical transformation |
| 28-4-26 | Conditions of a transformation in terms of Lagranges brackets |
| 29-4-26 | " |
| 30-4-26 | " |
| 1-5-26 | Jacobian Matrix of a Canonical transformation |
| 2-5-26 | " |
| **WEEK 17** | |
| 4-5-26 | Revision |
| 5-5-26 | " |
| 6-5-26 | " |
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