# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms Shalini

Class and Section:-B.A. I

Subject:- Number Theory and Trigonometry

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Jan-18 | Holidays |
| | 2-Jan-18 | Holidays |
| | 3-Jan-18 | Holidays |
| | 4-Jan-18 | Holidays |
| | 5-Jan-18 | Holidays |
| | 6-Jan-18 | Few results and theorem on divisibility |
| | 7-Jan-18 | Sunday |
| 2 | 8-Jan-18 | Few question based on divisiblity and algorithm, GCD and LCM |
| | 9-Jan-18 | Introduction to different types of number, Euclid's first and second theorem |
| | 10-Jan-18 | Fundamental theorem of arithmetic |
| | 11-Jan-18 | Congruences and theorem based on congruences |
| | 12-Jan-18 | Congruences and theorem based on congruences-cont. |
| | 13-Jan-18 | Congruences and theorem based on congruences-cont. |
| | 14-Jan-18 | Sunday |
| 3 | 15-Jan-18 | Linear congruences and theorems |
| | 16-Jan-18 | Linear congruences and theorems-cont. |
| | 17-Jan-18 | Linear congruences and theorems-cont. |
| | 18-Jan-18 | Linear Diophantine equations |
| | 19-Jan-18 | Linear Diophantine equations-cont. |
| | 20-Jan-18 | Fermat's theorem and problems |
| | 21-Jan-18 | Sunday |
| 4 | 22-Jan-18 | Vasant Panchami |
| | 23-Jan-18 | Wilson's theorem and problems |
| | 24-Jan-18 | Sir Chhotu Ram Jayanti |
| | 25-Jan-18 | Chinese remainder theorems and problems |
| | 26-Jan-18 | Republic Day |
| | 27-Jan-18 | Problems from students and assign different topics of assignments |
| | 28-Jan-18 | Sunday |
| 5 | 29-Jan-18 | Test |
| | 30-Jan-18 | euler's function and some theorems |
| | 31-Jan-18 | Guru Ravidas Jayanti |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- **B.A. I**

Subject:- Number Theory and Trigonometry

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Feb-18 | Residue and least residue, Complete and reduced residue system |
| | 2-Feb-18 | Problems on Complete and reduced residue system |
| | 3-Feb-18 | Euler's generalization of Fermat's theorem, De Polignac's formula |
| | 4-Feb-18 | Sunday |
| 2 | 5-Feb-18 | functions d(n) and (n) and questions |
| | 6-Feb-18 | Moebius function and Moebius inversion formula and questions |
| | 7-Feb-18 | Quadratic congruences |
| | 8-Feb-18 | Quadratic congruences-cont. |
| | 9-Feb-18 | Legendre symbol and properties |
| | 10-Feb-18 | Maharshi Dayanand Saraswati Jayanti |
| | 11-Feb-18 | Sunday |
| 3 | 12-Feb-18 | Lemma of Gauss and problems |
| | 13-Feb-18 | Maha Shivratri |
| | 14-Feb-18 | Gauss reciprocity law and question |
| | 15-Feb-18 | revision |
| | 16-Feb-18 | De Moivre's Theorem and questions |
| | 17-Feb-18 | De Moivre's Theorem and questions-cont. |
| | 18-Feb-18 | Sunday |
| 4 | 19-Feb-18 | De Moivre's Theorem and questions-cont. |
| | 20-Feb-18 | Roots of complex number, Solution of equation |
| | 21-Feb-18 | Expansion of tan nθ |
| | 22-Feb-18 | Formation of equations |
| | 23-Feb-18 | Expansion of sin nθ and cos nθ |
| | 24-Feb-18 | Exponential function of a complex variable and its properties |
| | 25-Feb-18 | Sunday |
| 5 | 26-Feb-18 | Circular function of complex variable |
| | 27-Feb-18 | Circular function of complex variable-cont |
| | 28-Feb-18 | Vacations-II (Holi Vacation) |

# Lesson Plan

Name of the Assistant/ Associate Professor: - Ms. Shalini

Class and Section:- **B.A. I**

Subject:- Number Theory and Trigonometry

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Mar-18 | Vacations-II (Holi vacation) |
| | 2-Mar-18 | Vacations-II (Holi vacation) |
| | 3-Mar-18 | Vacations-II (Holi vacation) |
| | 4-Mar-18 | Vacations-II (Holi vacation) |
| 2 | 5-Mar-18 | Periodicity of circular function, Trigonometric formulas for complex quantities |
| | 6-Mar-18 | Questions based on circular function |
| | 7-Mar-18 | Questions based on circular function-cont |
| | 8-Mar-18 | Hyperbolic function and its periodicity |
| | 9-Mar-18 | Revision and allotment of topics for assignment |
| | 10-Mar-18 | test |
| | 11-Mar-18 | Sunday |
| 3 | 12-Mar-18 | Relation between hyperbolic and circular functions |
| | 13-Mar-18 | Questions based on hyperbolic function |
| | 14-Mar-18 | Separation into real and imaginary parts of circular and hyperbolic functions |
| | 15-Mar-18 | Separation into real and imaginary parts of circular and hyperbolic functions-cont. |
| | 16-Mar-18 | Logarithm of a complex quantities and its law |
| | 17-Mar-18 | Logarithm of a complex quantities and its law-cont. |
| | 18-Mar-18 | Sunday |
| 4 | 19-Mar-18 | General log and exponential function |
| | 20-Mar-18 | General log and exponential function-cont. |
| | 21-Mar-18 | Inverse circular function and questions |
| | 22-Mar-18 | Inverse circular function and questions-cont. |
| | 23-Mar-18 | Shaheedi Diwas of Bhagat Singh, Rajguru & Sukhdev |
| | 24-Mar-18 | Problems from students |
| | 25-Mar-18 | Sunday/ Ram Navami |
| 5 | 26-Mar-18 | test |
| | 27-Mar-18 | Inverse circular function and questions |
| | 28-Mar-18 | Inverse circular function and questions-cont. |
| | 29-Mar-18 | Mahavir Jayanti |
| | 30-Mar-18 | General values and principal value |
| | 31-Mar-18 | General values and principal value-cont |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- . **B.A. I**

Subject:- Number Theory and Trigonometry

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Apr-18 | Sunday |
| | 2-Apr-18 | Inverse hyperbolic function and its General values and principal value |
| | 3-Apr-18 | Inverse hyperbolic function and its General values and principal value-cont. |
| | 4-Apr-18 | Numerical problems |
| | 5-Apr-18 | Series of sines and cosines of angles which are in A.P. |
| | 6-Apr-18 | Method of differences |
| | 7-Apr-18 | C+ i S Method of summation |
| | 8-Apr-18 | Sunday |
| 2 | 9-Apr-18 | Problems of previous chapter |
| | 10-Apr-18 | Discussion of assignments |
| | 11-Apr-18 | Revision of unit 1 |
| | 12-Apr-18 | Revision of unit 1-cont. |
| | 13-Apr-18 | Test of unit 1 |
| | 14-Apr-18 | Dr Ambedkar Jayanti / Vaisakhi |
| | 15-Apr-18 | Sunday |
| 3 | 16-Apr-18 | Revision of unit 2 |
| | 17-Apr-18 | Revision of unit 2 |
| | 18-Apr-18 | Parashurama Jayanti |
| | 19-Apr-18 | Test of unit 2 |
| | 20-Apr-18 | Revision of unit 3 |
| | 21-Apr-18 | Revision of unit 3-cont. |
| | 22-Apr-18 | Sunday |
| 4 | 23-Apr-18 | Test of unit 3 |
| | 24-Apr-18 | Revision of unit 4 |
| | 25-Apr-18 | Revision of unit 4 –con t. |
| | 26-Apr-18 | Test of unit 4 |
| | 27-Apr-18 | Solution of Previous year question paper |
| | 28-Apr-18 | Solution of Previous year question paper-cont. |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. II

Subject:- Special Functions and Integral Transforms

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Jan-18 | Holiday |
| | 2-Jan-18 | Holiday |
| | 3-Jan-18 | Holiday |
| | 4-Jan-18 | Holiday |
| | 5-Jan-18 | Holiday |
| | 6-Jan-18 | Power series |
| | 7-Jan-18 | Sunday |
| 2 | 8-Jan-18 | Power series basic problems |
| | 9-Jan-18 | Analytic Functions,Ordinary and Singular Points of Differential Equations |
| | 10-Jan-18 | Power Series Solution and questions |
| | 11-Jan-18 | Frobenius Method |
| | 12-Jan-18 | Indicial Equations and Power Series Solutions |
| | 13-Jan-18 | Numerical problems |
| | 14-Jan-18 | Sunday |
| 3 | 15-Jan-18 | Beta and Gamma Function |
| | 16-Jan-18 | Bessel's Equation and its Solution |
| | 17-Jan-18 | Bessel's Function, Deduction of Bessel's Function in the form of series |
| | 18-Jan-18 | Recurrence Relations for Bessel's Function with questions |
| | 19-Jan-18 | Generating Function for $J_n(x)$ |
| | 20-Jan-18 | Represention of $J_n(x)$ in Integral |
| | 21-Jan-18 | Sunday |
| 4 | 22-Jan-18 | Vasant Panchami |
| | 23-Jan-18 | Jacobis series |
| | 24-Jan-18 | Sir Chhotu Ram Jayanti |
| | 25-Jan-18 | Solution of Legendre's Equation<br>Legendre's Polynomial |
| | 26-Jan-18 | Republic Day |
| | 27-Jan-18 | Rodrigue's Formula<br>Derivation of Legendre's Polynomial from Rodrigue's Formula |
| | 28-Jan-18 | Sunday |
| 5 | 29-Jan-18 | Generating Function for $P_n(x)$ and questions |
| | 30-Jan-18 | Recurrence Relations, Orthogonality of Legendre olynomial |
| | 31-Jan-18 | Guru Ravidas Jayanti |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. II

Subject:- . Special Functions and Integral Transforms

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Feb-18 | problems |
| | 2-Feb-18 | Solution of Hermite's Equation, Hermite's Polynomial |
| | 3-Feb-18 | Generating Function for Hermite's Polynomial, Rodrigue's Formula for $H_n(x)$ |
| | 4-Feb-18 | Sunday |
| 2 | 5-Feb-18 | Recurrence Relations with questions |
| | 6-Feb-18 | Cont. |
| | 7-Feb-18 | Laplace Transformation with some basic formulas |
| | 8-Feb-18 | Linear Property of Laplace Transformation with questions |
| | 9-Feb-18 | First Shifting Property, Results Obtained by First Shifting Property<br>Change of Scale Property |
| | 10-Feb-18 | Maharshi Dayanand Saraswati Jayanti |
| | 11-Feb-18 | Sunday |
| 3 | 12-Feb-18 | Questions solving |
| | 13-Feb-18 | Maha Shivratri |
| | 14-Feb-18 | Piece-Wise Continuity of a Function in an Interval, Second Shifting Property |
| | 15-Feb-18 | Laplace Transformation of Derivatives, Effect of Multiplication of f(t) by $t^n$ in finding Laplace Transform, Effect of Division of f(t) by t in finding Laplace Transform |
| | 16-Feb-18 | Question solving |
| | 17-Feb-18 | Test |
| | 18-Feb-18 | Sunday |
| 4 | 19-Feb-18 | Laplace Transform of Periodic Function and integrals |
| | 20-Feb-18 | Questions |
| | 21-Feb-18 | Laplace Transform of some important Function with examples |
| | 22-Feb-18 | Inverse Laplace Transform with examples |
| | 23-Feb-18 | Other Methods to find Inverse Laplace Transform with questions |
| | 24-Feb-18 | Convolution Theorem with examples |
| | 25-Feb-18 | Sunday |
| 5 | 26-Feb-18 | Integral Equations and Examples on Laplace Transforms in Integral Equations |
| | 27-Feb-18 | Solution of Linear D.E. with constant coefficients and Solution of Linear D.E. with variable coefficients |
| | 28-Feb-18 | Vacations-II (Holi Vacation) |

# Lesson Plan

Name of the Assistant/ Associate Professor: - Ms. Shalini

Class and Section:- B.A. II

Subject:- Special Functions and Integral Transforms

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Mar-18 | Vacations-II (Holi vacation) |
| | 2-Mar-18 | Vacations-II (Holi vacation) |
| | 3-Mar-18 | Vacations-II (Holi vacation) |
| | 4-Mar-18 | Vacations-II (Holi vacation) |
| 2 | 5-Mar-18 | test |
| | 6-Mar-18 | Solution of Simultaneous Linear Equation with constant coefficients |
| | 7-Mar-18 | problems |
| | 8-Mar-18 | Infinite Fourier Transform |
| | 9-Mar-18 | Fourier sineTransform |
| | 10-Mar-18 | Fourier cosineTransform |
| | 11-Mar-18 | Sunday |
| 3 | 12-Mar-18 | Properties of Fourier Transforms |
| | 13-Mar-18 | Change of Scale Properties |
| | 14-Mar-18 | Shifting and Modulation Property |
| | 15-Mar-18 | Examples on Fourier sine and cosine Transforms |
| | 16-Mar-18 | Examples on Fourier sine and cosine Transforms |
| | 17-Mar-18 | test |
| | 18-Mar-18 | Sunday |
| 4 | 19-Mar-18 | Examples based on the use of Inverse Transforms |
| | 20-Mar-18 | Examples based on the use of Inverse Transforms |
| | 21-Mar-18 | Revision |
| | 22-Mar-18 | Presentation by students |
| | 23-Mar-18 | Shaheedi Diwas of Bhagat Singh, Rajguru & Sukhdev |
| | 24-Mar-18 | Presentation by students |
| | 25-Mar-18 | Sunday/ Ram Navami |
| 5 | 26-Mar-18 | Convolution Theorem and Fourier Transform of the Derivative |
| | 27-Mar-18 | Cont. |
| | 28-Mar-18 | Parseval's Identities with Examples |
| | 29-Mar-18 | Mahavir Jayanti |
| | 30-Mar-18 | Relation between Fourier and Laplace Tranform |
| | 31-Mar-18 | revision |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. II

Subject:- Special Functions and Integral Transforms

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Apr-18 | Sunday |
| | 2-Apr-18 | Finite Fourier sine and cosine Transform with Examples |
| | 3-Apr-18 | Solution of Differtial Equation by Fourier Transforms Examples |
| | 4-Apr-18 | Solution of Differtial Equation by Fourier Transforms Examples |
| | 5-Apr-18 | Revision |
| | 6-Apr-18 | Problems from students |
| | 7-Apr-18 | Test |
| | 8-Apr-18 | Sunday |
| 2 | 9-Apr-18 | Revision |
| | 10-Apr-18 | Revision |
| | 11-Apr-18 | Revision |
| | 12-Apr-18 | Revision |
| | 13-Apr-18 | Revision |
| | 14-Apr-18 | Dr Ambedkar Jayanti / Vaisakhi |
| | 15-Apr-18 | Sunday |
| 3 | 16-Apr-18 | Solution of previous year paper |
| | 17-Apr-18 | Cont. |
| | 18-Apr-18 | Parashurama Jayanti |
| | 19-Apr-18 | Test of unit one |
| | 20-Apr-18 | Discussion of test |
| | 21-Apr-18 | Test of unit two |
| | 22-Apr-18 | Sunday |
| 4 | 23-Apr-18 | Discussion of test |
| | 24-Apr-18 | Test of unit three |
| | 25-Apr-18 | Discussion of test |
| | 26-Apr-18 | Test of unit four |
| | 27-Apr-18 | Discussion of test |
| | 28-Apr-18 | Test of complete book |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:-B.A. III

Subject:- Numerical Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Jan-18 | Holidays |
| | 2-Jan-18 | Holidays |
| | 3-Jan-18 | Holidays |
| | 4-Jan-18 | Holidays |
| | 5-Jan-18 | Holidays |
| | 6-Jan-18 | Overview \discussion of syllabus in the book |
| | 7-Jan-18 | Sunday |
| 2 | 8-Jan-18 | Finite difference operators(Forward , Backward and Central difference operator and their properties), Fundamental theorem of difference calculus |
| | 9-Jan-18 | The operator E and their properties |
| | 10-Jan-18 | Numerical problems related to different difference operators |
| | 11-Jan-18 | Effect of an error in a tabular value(Missing terms) and related problems |
| | 12-Jan-18 | Interpolation with Equal Intervals |
| | 13-Jan-18 | Take problems from students and give assignment from the syllabus covered |
| | 14-Jan-18 | Sunday |
| 3 | 15-Jan-18 | interpolation and extrapolation |
| | 16-Jan-18 | Newton-Gregory formula for forward interpolation and their problems |
| | 17-Jan-18 | Newton-Gregory formula for backward interpolation and their problems |
| | 18-Jan-18 | Problems of previous two lect. –cont. |
| | 19-Jan-18 | Subdivision of intervals and related examples |
| | 20-Jan-18 | Take problems from students and give assignment from the syllabus covered |
| | 21-Jan-18 | Sunday |
| 4 | 22-Jan-18 | Vasant Panchami |
| | 23-Jan-18 | divided difference and related theorems |
| | 24-Jan-18 | Sir Chhotu Ram Jayanti |
| | 25-Jan-18 | Newton's divided difference interpolation formula for unequal intervals and related examples |
| | 26-Jan-18 | Republic Day |
| | 27-Jan-18 | Relation between divided differences and ordinary differences and related examples |
| | 28-Jan-18 | Sunday |
| 5 | 29-Jan-18 | More examples related to Divided Differences |
| | 30-Jan-18 | Lagrange's interpolation formula and related examples |
| | 31-Jan-18 | Guru Ravidas Jayanti |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. III

Subject:- . Numerical Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Feb-18 | Lagrange's interpolation formula and related examples-cont. |
| | 2-Feb-18 | Discussion about the assignments submitted |
| | 3-Feb-18 | Take problems from students and give assignment from the syllabus covered |
| | 4-Feb-18 | Sunday |
| 2 | 5-Feb-18 | *Test* |
| | 6-Feb-18 | Hermite's interpolation formula and related examples |
| | 7-Feb-18 | Interpolation with unequal intervals |
| | 8-Feb-18 | central difference, Gauss forward interpolation formula and related examples |
| | 9-Feb-18 | Gauss backward interpolation formula and related examples |
| | 10-Feb-18 | Maharshi Dayanand Saraswati Jayanti |
| | 11-Feb-18 | Sunday |
| 3 | 12-Feb-18 | Sterling formula and related examples |
| | 13-Feb-18 | Maha Shivratri |
| | 14-Feb-18 | Central Difference Interpolation formula and related examples |
| | 15-Feb-18 | Bessle's formula and related examples |
| | 16-Feb-18 | Take problems from students and give assignment from the syllabus covered |
| | 17-Feb-18 | test |
| | 18-Feb-18 | Sunday |
| 4 | 19-Feb-18 | A review of Probability and results |
| | 20-Feb-18 | Examples of probability distribution of a random variable, Mean and variance of a random variable |
| | 21-Feb-18 | Problems based on mean and variance of a random variable |
| | 22-Feb-18 | Binomial distribution and related examples |
| | 23-Feb-18 | Mean and variance of binomial distribution, recurrence formula |
| | 24-Feb-18 | Problems based on properties of binomial distribution |
| | 25-Feb-18 | Sunday |
| 5 | 26-Feb-18 | Fitting a binomial distribution |
| | 27-Feb-18 | Problems based on fitting a binomial distribution |
| | 28-Feb-18 | Vacations-II (Holi Vacation) |

# Lesson Plan

Name of the Assistant/ Associate Professor: Ms. Shalini

Class and Section:- B.A. III

Subject:- Numerical Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Mar-18 | Vacations-II (Holi vacation) |
| | 2-Mar-18 | Vacations-II (Holi vacation) |
| | 3-Mar-18 | Vacations-II (Holi vacation) |
| | 4-Mar-18 | Vacations-II (Holi vacation) |
| 2 | 5-Mar-18 | Poisson distribution, Mean, variance and recurrence formula of poisson distribution |
| | 6-Mar-18 | Problems related to poisson distribution and their properties |
| | 7-Mar-18 | Fitting a poisson distribution and related properties |
| | 8-Mar-18 | Normal distribution and its properties |
| | 9-Mar-18 | Problems related to Normal distribution and its properties |
| | 10-Mar-18 | Fitting of a Normal curve and problems |
| | 11-Mar-18 | Sunday |
| 3 | 12-Mar-18 | Method of area to find the expected frequencies for normal curve |
| | 13-Mar-18 | Problems to find the expected frequencies for normal curve under the method of area |
| | 14-Mar-18 | problems related to Probability distribution |
| | 15-Mar-18 | Derivatives Using Newton's Forward and Backward Interpolation formula |
| | 16-Mar-18 | Derivatives Using Sterling and Bessel's Central Difference Formula and Newton's Divided Difference formula |
| | 17-Mar-18 | Take problems from students and give assignment from the syllabus covered |
| | 18-Mar-18 | Sunday |
| 4 | 19-Mar-18 | Problems to find the different derivative when some tabulated table is given |
| | 20-Mar-18 | Eigen values and Eigen vectors and some properties , Problems to find the eigen values and their corresponding eigen vectors of the matrix |
| | 21-Mar-18 | Power method and problems to find the largest eigen value of the matrix |
| | 22-Mar-18 | Jacobi's method for symmetric matrix, method to find all the eigen values and eigen vectors of the matrix |
| | 23-Mar-18 | Shaheedi Diwas of Bhagat Singh, Rajguru & Sukhdev |
| | 24-Mar-18 | Given's Method and Problems and find the eigen vector corresponding to the largest eigen value from the eigen vectors of the tridiagonal matrix. |
| | 25-Mar-18 | Sunday/ Ram Navami |
| 5 | 26-Mar-18 | House-Holder's method and problems based on House-Holder's method |
| | 27-Mar-18 | QR method and Lanczo's method and related problems |
| | 28-Mar-18 | test |
| | 29-Mar-18 | Mahavir Jayanti |
| | 30-Mar-18 | Problems from students |
| | 31-Mar-18 | Newton Cotes Quadrature formula and related problems |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. III

Subject:- Numerical Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Apr-18 | Sunday |
| | 2-Apr-18 | Numerical Integration by trapezoidal rule and related problems |
| | 3-Apr-18 | Numerical Integration by Simpson's 1/3 rule and related problems |
| | 4-Apr-18 | Numerical Integration by Simpson's 3/8 rule and related problems |
| | 5-Apr-18 | Numerical Integration by Gauss's Quadrature formula and related problems |
| | 6-Apr-18 | Numerical Integration by Chebyshev's Quadrature formula and related problems |
| | 7-Apr-18 | Presentation by students on topic of their choice |
| | 8-Apr-18 | Sunday |
| 2 | 9-Apr-18 | Introducition: Initial and Boundary conditions, Single step and Multi step method, Euler's method and related examples |
| | 10-Apr-18 | Modified Euler's Method and related examples |
| | 11-Apr-18 | More problems on Euler's method and Modified Euler's method |
| | 12-Apr-18 | Taylor's series method and problems related to Taylor's series method |
| | 13-Apr-18 | Runge-Kutta method of First and Second order and its examples |
| | 14-Apr-18 | Dr Ambedkar Jayanti / Vaisakhi |
| | 15-Apr-18 | Sunday |
| 3 | 16-Apr-18 | Runge-Kutta method of Third and Fourth order and its examples |
| | 17-Apr-18 | problems related to Taylor's series and R-K method |
| | 18-Apr-18 | Parashurama Jayanti |
| | 19-Apr-18 | Picard's Method and problems related with Picard's method |
| | 20-Apr-18 | Predictor-Corrector Methods, Milne-Simpson's method and its examples |
| | 21-Apr-18 | Adams-Bashforth Predictor Formula and Adams-Moulton Corrector Formula and its examples |
| | 22-Apr-18 | Sunday |
| 4 | 23-Apr-18 | examples related to Numerical Solution of Ordinary Differential Equations |
| | 24-Apr-18 | Take problems from students |
| | 25-Apr-18 | Revision of chapter 1,2,3 |
| | 26-Apr-18 | Revision of chapter 4,5 |
| | 27-Apr-18 | Revision of chapter 6,7 |
| | 28-Apr-18 | Revision of chapter 8,9 |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. III

Subject:- Real and Complex Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Jan-18 | Holiday |
| | 2-Jan-18 | Holiday |
| | 3-Jan-18 | Holiday |
| | 4-Jan-18 | Holiday |
| | 5-Jan-18 | Holiday |
| | 6-Jan-18 | Jacobian:- basic definitions and examples |
| | 7-Jan-18 | Sunday |
| 2 | 8-Jan-18 | Jacobian:- basic definitions and examples |
| | 9-Jan-18 | Chain rule for Jacobians and related examples |
| | 10-Jan-18 | Numerical Problems related to Jacobian |
| | 11-Jan-18 | Functional Dependence and their examples |
| | 12-Jan-18 | Numerical Problems related to Functional Dependence |
| | 13-Jan-18 | Give brief overview of chapter-1 and take problems and assignment allotment |
| | 14-Jan-18 | Sunday |
| 3 | 15-Jan-18 | Beta function: definition and its properties |
| | 16-Jan-18 | Examples related to Beta function |
| | 17-Jan-18 | Numerical Problems related to Beta function |
| | 18-Jan-18 | Gamma function: definition and its recurrence formula |
| | 19-Jan-18 | Relationship between Beta and Gamma function and their properties.<br>Illustration with examples. |
| | 20-Jan-18 | Duplication Formula and their examples |
| | 21-Jan-18 | Sunday |
| 4 | 22-Jan-18 | Vasant Panchami |
| | 23-Jan-18 | Numerical Problems related to Duplication Formula |
| | 24-Jan-18 | Sir Chhotu Ram Jayanti |
| | 25-Jan-18 | test |
| | 26-Jan-18 | Republic Day |
| | 27-Jan-18 | Brief Introduction of chap-3 , Evaluation of Double Integrals |
| | 28-Jan-18 | Sunday |
| 5 | 29-Jan-18 | Numerical Problems related to Double Integrals |
| | 30-Jan-18 | Triple integrals – introduction, Substitution Method for Triple Integrals |
| | 31-Jan-18 | Guru Ravidas Jayanti |

# Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. III

Subject:- Real and Complex Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Feb-18 | Examples related to Substitution Method for Triple Integrals |
| | 2-Feb-18 | Numerical Problems related to Triple Integrals |
| | 3-Feb-18 | Application of Double and Triple integrals for finding Area and Volume of Surfaces |
| | 4-Feb-18 | Sunday |
| 2 | 5-Feb-18 | Numerical Problems related to Application of Double and Triple integrals |
| | 6-Feb-18 | Dirichlet's Integral, Liouville's Extension of Dirichlet's integral |
| | 7-Feb-18 | Examples related to Dirichlet's Integral |
| | 8-Feb-18 | Numerical Problems related to Dirichlet's Integral and Liouville's Extension of Dirichlet's integral |
| | 9-Feb-18 | Change of order of integration in double integrals Article and its examples |
| | 10-Feb-18 | Numerical Problems related to Change of order of integration in double integrals |
| | 11-Feb-18 | Sunday |
| 3 | 12-Feb-18 | Revision and assignment allotment |
| | 13-Feb-18 | Maha Shivratri |
| | 14-Feb-18 | Fourier's series: Definition and its Properties, Fourier expansion of piecewise monotonic functions |
| | 15-Feb-18 | Euler's Formulae, Fourier series for even and odd functions, Dirichlet's conditions |
| | 16-Feb-18 | Properties of Fourier Coefficients, Fourier expansion of piecewise monotonic functions |
| | 17-Feb-18 | Numerical Problems related to Fourier expansion of piecewise monotonic functions |
| | 18-Feb-18 | Sunday |
| 4 | 19-Feb-18 | Fourier expansion of functions having points of discontinuity and related examples |
| | 20-Feb-18 | Numerical Problems related to Fourier expansion of functions having points of discontinuity |
| | 21-Feb-18 | Change of Intervals property and its examples |
| | 22-Feb-18 | Half range series and its examples |
| | 23-Feb-18 | Parseval's identity for Fourier series and its examples |
| | 24-Feb-18 | Numerical Problems related to Parseval's identity for Fourier series |
| | 25-Feb-18 | Sunday |
| 5 | 26-Feb-18 | problems |
| | 27-Feb-18 | Give brief overview of chapter-4 and take problems-cont |
| | 28-Feb-18 | Vacations-II (Holi Vacation) |

# Lesson Plan

Name of the Assistant/ Associate Professor: - Ms. Shalini

Class and Section:- B.A. III

Subject:- Real and Complex Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Mar-18 | Vacations-II (Holi vacation) |
| | 2-Mar-18 | Vacations-II (Holi vacation) |
| | 3-Mar-18 | Vacations-II (Holi vacation) |
| | 4-Mar-18 | Vacations-II (Holi vacation) |
| 2 | 5-Mar-18 | test |
| | 6-Mar-18 | theorems |
| | 7-Mar-18 | Introduction to Complex Plane and Stereographic projection of complex numbers |
| | 8-Mar-18 | Examples related to Stereographic projection of complex numbers |
| | 9-Mar-18 | Complex Functions definitions, Limit, continuity, uniform continuity of complex functions |
| | 10-Mar-18 | Examples related to Limit, continuity, uniform continuity of complex functions |
| | 11-Mar-18 | Sunday |
| 3 | 12-Mar-18 | Differentiability of complex function, Rule of differentiation and geometric interpretation of the derivative |
| | 13-Mar-18 | Numerical Problems related to Limit, continuity, Differentiability, uniform continuity of complex functions |
| | 14-Mar-18 | Analytic functions and Necessary condition for a function to be analytic, Cauchy-Riemann equations |
| | 15-Mar-18 | Sufficient condition for a function to be analytic and their examples |
| | 16-Mar-18 | \Cauchy-Riemann equations in Polar form, Orthogonal System |
| | 17-Mar-18 | Harmonic functions and its examples |
| | 18-Mar-18 | Sunday |
| 4 | 19-Mar-18 | Construction of Analytic functions by Milne-Thompson's Method and its examples |
| | 20-Mar-18 | Construction of Analytic functions by Exact Differential Method and its examples |
| | 21-Mar-18 | Test |
| | 22-Mar-18 | Applications of Analytic functions to field and flow problems and numerical problems related to these topics. |
| | 23-Mar-18 | Multi-valued Functions, Branch, Branch Cut, Branch Points, Exponential function, properties of exponential functions. |
| | 24-Mar-18 | Trigonometry functions and its properties, Hyperbolic functions and its properties |
| | 25-Mar-18 | Sunday/ Ram Navami |
| 5 | 26-Mar-18 | The Logarithmic functions and its properties, Inverse trigonometric and hyperbolic functions and its properties |
| | 27-Mar-18 | Mappings, Translation mappings, Rotation mappings and their examples |

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| | 28-Mar-18 | Magnification, Rotation and Magnification, and their examples |
| | 29-Mar-18 | Mahavir Jayanti |
| | 30-Mar-18 | Inversion mappings and its examples |
| | 31-Mar-18 | Conformal mappings and its properties,examples |

## Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. III

Subject:- Real and Complex Analysis

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Apr-18 | Sunday |
| | 2-Apr-18 | Linear transformation, Bilinear transformation with articles |
| | 3-Apr-18 | Cont. |
| | 4-Apr-18 | Examples related to Bilinear transformation |
| | 5-Apr-18 | Critical points and its examples |
| | 6-Apr-18 | Fixed points and their examples |
| | 7-Apr-18 | Nature of Bilinear transformation and its examples,articles |
| | 8-Apr-18 | Sunday |
| 2 | 9-Apr-18 | Examples based on Bilinear transformation |
| | 10-Apr-18 | Cross Ratio and its articles with examples |
| | 11-Apr-18 | Some examples based on Cross Ratio, Inverse Points |
| | 12-Apr-18 | Exponential Transformations and its examples with articles |
| | 13-Apr-18 | Revision |
| | 14-Apr-18 | Dr Ambedkar Jayanti / Vaisakhi |
| | 15-Apr-18 | Sunday |
| 3 | 16-Apr-18 | Test |
| | 17-Apr-18 | Logarithmic Transformations and its examples with articles |
| | 18-Apr-18 | Parashurama Jayanti |
| | 19-Apr-18 | Trigonometric transformations and its examples with articles |
| | 20-Apr-18 | Linear fractional transformations and its examples with articles |
| | 21-Apr-18 | Joukowski's transformation and its examples |
| | 22-Apr-18 | Sunday |
| 4 | 23-Apr-18 | Some Theorems and Examples based on Critical mappings |
| | 24-Apr-18 | Revision |

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| | 25-Apr-18 | Revision |
| | 26-Apr-18 | Revision |
| | 27-Apr-18 | Revision |
| | 28-Apr-18 | Revision |

## Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. III

Subject:- .Numerical Analysis(practicals)

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Jan-18 | Holidays |
| | 2-Jan-18 | Holidays |
| | 3-Jan-18 | Holidays |
| | 4-Jan-18 | Holidays |
| | 5-Jan-18 | Holidays |
| | 6-Jan-18 | Basics of computer revision |
| | 7-Jan-18 | Sunday |
| 2 | 8-Jan-18 | Off |
| | 9-Jan-18 | Basics of computer revision |
| | 10-Jan-18 | Off |
| | 11-Jan-18 | Basics of computer revision |
| | 12-Jan-18 | Off |
| | 13-Jan-18 | Basics of computer revision |
| | 14-Jan-18 | Sunday |
| 3 | 15-Jan-18 | Off |
| | 16-Jan-18 | Basics of computer revision |
| | 17-Jan-18 | Off |
| | 18-Jan-18 | Basics of c language revision |
| | 19-Jan-18 | Off |
| | 20-Jan-18 | Basics of c language revision |
| | 21-Jan-18 | Sunday |
| 4 | 22-Jan-18 | Vasant Panchami |
| | 23-Jan-18 | Basics of c language revision |
| | 24-Jan-18 | Sir Chhotu Ram Jayanti |
| | 25-Jan-18 | Basics of c language revision |
| | 26-Jan-18 | Republic Day |
| | 27-Jan-18 | Loops revision |

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| | 28-Jan-18 | Sunday |
| 5 | 29-Jan-18 | Off |
| | 30-Jan-18 | Loops revision |
| | 31-Jan-18 | Guru Ravidas Jayanti |

## Lesson Plan

Name of the Assistant/ Associate Professor :- .....

Class and Section:- .....

Subject:- .....

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Feb-18 | Basic programs- compound interest, leap year, greatest number |
| | 2-Feb-18 | Off |
| | 3-Feb-18 | Basic programs-matrix addition , matrix multiplication |
| | 4-Feb-18 | Sunday |
| 2 | 5-Feb-18 | Off |
| | 6-Feb-18 | Program for Gauss forward and Gauss's backward interpolation formulae |
| | 7-Feb-18 | Off |
| | 8-Feb-18 | Algorithm for Gauss forward and Gauss's backward interpolation formulae |
| | 9-Feb-18 | off |
| | 10-Feb-18 | Maharshi Dayanand Saraswati Jayanti |
| | 11-Feb-18 | Sunday |
| 3 | 12-Feb-18 | Off |
| | 13-Feb-18 | Maha Shivratri |
| | 14-Feb-18 | Off |
| | 15-Feb-18 | Program for Trapezoidal rule |
| | 16-Feb-18 | Off |
| | 17-Feb-18 | Algorithm for Trapezoidal rule |
| | 18-Feb-18 | Sunday |
| 4 | 19-Feb-18 | Off |
| | 20-Feb-18 | Program for Simpson's onethird and three-eighth rule |
| | 21-Feb-18 | Off |
| | 22-Feb-18 | Algorithm for Simpson's onethird and three-eighth rule |
| | 23-Feb-18 | Off |
| | 24-Feb-18 | Program for v |

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| | 25-Feb-18 | Sunday |
| 5 | 26-Feb-18 | Off |
| | 27-Feb-18 | Algorithm for Gauss Quadrature formula |
| | 28-Feb-18 | Vacations-II (Holi Vacation) |

## Lesson Plan

Name of the Assistant/ Associate Professor: - Ms. Shalini

Class and Section:- B.A. III

Subject:- Numerical Analysis(practicals)

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Mar-18 | Vacations-II (Holi vacation) |
| | 2-Mar-18 | Vacations-II (Holi vacation) |
| | 3-Mar-18 | Vacations-II (Holi vacation) |
| | 4-Mar-18 | Vacations-II (Holi vacation) |
| 2 | 5-Mar-18 | Off |
| | 6-Mar-18 | Program for Euler's method |
| | 7-Mar-18 | Off |
| | 8-Mar-18 | Algorithm for Euler's method |
| | 9-Mar-18 | Off |
| | 10-Mar-18 | Program for Runge-Kutta Methods |
| | 11-Mar-18 | Sunday |
| 3 | 12-Mar-18 | Off |
| | 13-Mar-18 | Algorithm for Runge-Kutta Methods |
| | 14-Mar-18 | Off |
| | 15-Mar-18 | Program for Predictor-corrector method |
| | 16-Mar-18 | Off |
| | 17-Mar-18 | Algorithm for Predictor-corrector method |
| | 18-Mar-18 | Sunday |
| 4 | 19-Mar-18 | Off |
| | 20-Mar-18 | Program for Modified Euler's method |
| | 21-Mar-18 | Off |
| | 22-Mar-18 | Algorithm for Modified Euler's method |
| | 23-Mar-18 | Shaheedi Diwas of Bhagat Singh, Rajguru & Sukhdev |
| | 24-Mar-18 | Program for Milne-Simpson's method. |

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| | 25-Mar-18 | Sunday/ Ram Navami |
| 5 | 26-Mar-18 | Off |
| | 27-Mar-18 | Algorithm for Milne-Simpson's method. |
| | 28-Mar-18 | Off |
| | 29-Mar-18 | Mahavir Jayanti |
| | 30-Mar-18 | Off |
| | 31-Mar-18 | Completion of file |

## Lesson Plan

Name of the Assistant/ Associate Professor :- Ms. Shalini

Class and Section:- B.A. III

Subject:- . Numerical Analysis(practicals)

| Week | Date | Topics |
|---|---|---|
| 1 | 1-Apr-18 | Sunday |
| | 2-Apr-18 | Off |
| | 3-Apr-18 | Completion of file |
| | 4-Apr-18 | Off |
| | 5-Apr-18 | Completion of file |
| | 6-Apr-18 | Off |
| | 7-Apr-18 | Completion of file |
| | 8-Apr-18 | Sunday |
| 2 | 9-Apr-18 | Off |
| | 10-Apr-18 | Checking of file |
| | 11-Apr-18 | Off |
| | 12-Apr-18 | Checking of file |
| | 13-Apr-18 | Off |
| | 14-Apr-18 | Dr Ambedkar Jayanti / Vaisakhi |
| | 15-Apr-18 | Sunday |
| 3 | 16-Apr-18 | Off |
| | 17-Apr-18 | Checking of file |
| | 18-Apr-18 | Parashurama Jayanti |
| | 19-Apr-18 | Checking of file |
| | 20-Apr-18 | Off |
| | 21-Apr-18 | Revision |
| | 22-Apr-18 | Sunday |

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| 4 | 23-Apr-18 | Off |
| | 24-Apr-18 | Revision |
| | 25-Apr-18 | off |
| | 26-Apr-18 | Revision |
| | 27-Apr-18 | off |
| | 28-Apr-18 | Revision |