Name of Program: B Tech. (Electrical Engineering)

Subject Code	Category	Subject Name	Teaching &Evaluation Scheme							
			Theory			Practical		L	T	P
			End Sem University Exam	Two Term Exam	Teachers Assessment*	End Sem University Exam	Teachers Assessment*			
BTEE401		Electrical Machines-I	60	20	20	30	20	3	1	2

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Q/A Quiz/Assignment/Attendance, MST Mid Sem Test.

Course Educational Objectives (CEOs):
To prepare the students to have a basic and practical knowledge of transformers. To prepare the students to have a basic knowledge of induction motors. To introduce students with the concept of Sngle phase induction machine.

Course Outcomes (COs): Upon completion of this course students will be able to:

1. Demonstrate various parts of a electrical machine.
2. Conduct Different test on transformer.
3. Choose suitable Induction machine for specific applications.
4. Demonstrate constructional details, principle of operation of Special Machines.

Syllabus

UNIT I
Single Phase Transformer: Working principle, Construction, types, EMF equation, Transformer on no load and on load, exact and approximate equivalent circuit, O.C & S.C. test on transformer, regulation of transformer, losses & efficiency, condition for maximum efficiency, All day efficiency, Efficiency curve, Sumpner's test, Parallel operation, Conditions, Parallel with equal and unequal voltage ratio.

UNIT II
Auto Transformer: comparison with ordinary transformer, equivalent circuit and phasor diagram, saving of conductor material. PU system of calculation.

UNIT III
Polyphase Transformer: Construction, Various connections and groups, choice of connections, open delta connection, Scott connection, three phase to two phase conversion and vice-versa, Applications.

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UNIT IV

Polyphase Induction Motor: Construction, types, rotating magnetic field, principle of operation, equivalent circuit, slip, frequency of rotor current, rotor emf, rotor current, expression for torque, conditions for maximum torque, torque slip characteristics, starting torque in squirrel cage and slip ring motors, relation between full load torque and maximum torque, Power stages in induction motor, speed control of 3 phase motor, starting methods for 3 phase induction motor.

UNIT V

Single Phase Induction Motor: Introduction, construction, principal, double revolving field theory, equivalent circuit, performance calculations, starting methods, and their types, torque slip characteristics of various types.

Text Books:

1. P.S. Bhimbra, Electrical Machinery, Khanna Pub.
2. I.J. Nagrath & D.P. Kothari, Electric Machines, Tata McGraw Hill , New Delhi,

Reference Books:

1. M.G. Say, Performance & design of AC machines, CBS publishers & distributors, Delhi, 3rd edition
2. A.E. Clayton & N.N. Nancock, The Performance & design of DC machines CBS publications & distributors, Delhi, 3rd edition
3. P.S. Bhimbra, Generalized theory of Electrical Machines, Khanna publishers, Delhi,
4. Ashfaq Husain, Electric Machines, Dhanpat Rai, New Delhi.
5. Syed A. Nasar, Electric Machines & Power Systems, Volume I , Tata McGraw Hill, New Delhi
6. E. Fitzerald, C. Kingsley & S.D. Umans , Electric Machinery Tata McGraw Hill ,New Delhi ,5 edition.

List of Experiments: Experiments can cover any of the above topics, following is a suggestive list:

1. Evaluation of turn's ratio and polarity test on 1-phase transformer.
2. Performance analysis of load test on a 1-phase transformer and plot its load characteristic
3. Performance analysis of OC and SC tests on a 3-phase transformer and determine its equivalent circuit. Also find its efficiency and regulation at different load and power factor.
4. Separation of No Load Losses In 1 Φ Transformer.
5. Performance analysis of Sumpner's test on two 1-phase transformer and determine its efficiency at various load.
6. Performance analysis of No-load and block rotor test on a 3-phase IM and determine its equivalent circuit.
7. Perform load test on a 3-phase IM and plot its performance characteristics.
8. Study various types of starters used for 3-IMs.
9. Perform No-load and block rotor test on a 1-phase IM and determine its equivalent circuit.
10. Realization of Scott connection.

Experiment beyond Syllabus:

1. Heat run test on transformer.
2. To study the windings of a transformer and assembling a small transformer.

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Name of Program: B. Tech. Electrical Engineering

(Session 2018-19)

Subject Code	Category	Subject Name	Teaching &Evaluation Scheme								
			Theory			Practical		L	T	P	Credits
			End Sem University Exam	Two Term Exam	Teachers Assessment*	End Sem University Exam	Teachers Assessment*				
BTEE402		Digital Electronics and Logic Design	60	20	20	30	20	3	1	2	5

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Q/A Quiz/Assignment/Attendance, MST Mid Sem Test.

Course Educational Objectives (CEOs):
To learn the basic methods for the design of digital circuits and provide the fundamental Concepts used in the design of digital systems. To outline the formal procedures for the analysis and design of combinational circuits and sequential circuits. To introduce the concept of memories and programmable logic devices. To illustrate the concept of synchronous and asynchronous sequential circuits.

Course Outcomes (COs): After the successful completion of this course students will be able to

1. Design combinational and sequential digital circuits to meet a given specification and be able to represent logic functions in multiple forms— understanding the advantages and disadvantages of each.
2. Understand how CMOS transistors can be used to realize digital logic circuits and understand basic characteristics of logic gates (such as power, noise margins, timing, tri-state circuitry, etc.).
3. Understand numerical and character representations in digital logic including ASCII, sign magnitude, 2's complement, and floating point and the corresponding design of arithmetic circuitry.
4. Understand the importance and need for verification and testing of digital logic circuits.
5. Understand the principle of operation and design of a wide range of electronic circuits such as computer RAM and ROM. CO6 Understand how convert signals from analog to digital and digital to analog.

Syllabus

UNIT-I

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NUMBER SYSTEMS AND CODES :Addition, Subtraction, Multiplication and Division using Different Number Systems; Representation of Binary Number in Sign-Magnitude, Sign 1's Complement and Sign 2's Complement Notation; Rules for Addition and Subtraction with Complement Reprsentation; BCD, EBCDIC, ASCII, Extended ASCII, Gray and other Codes.

BOOLEAN FUNCTION AND ITS MINIMIZATION: Simplification of Boolean Function using Boolean theorems; Canonical and Standard Forms(SOP and POS) for Boolean Functions; Objectives of the Minimization Procedures; Karnaugh Map Method;Don't Care Conditions;

UNIT-II

COMBINATIONAL LOGIC CIRCUITS USING DISCRETE LOGIC GATES:

Half Adder and Full Adder; Half Subtractor and Full Subtractor; Parity Generator and Checker; Code Converters; Carry look ahead generator; Binary Multiplier; Majority Circuits, Magnitude Comparator.

UNIT-III

COMBINATIONAL LOGIC USING MSI CIRCUITS:

Binary Parallel Adder; BCD Adder; Encoder, Priority Encoder, Decoder; Multiplexer and Demultiplexer Circuits; Programmable Logic Array (PLA) and Programmable Array Logic (PAL).

UNIT-IV

INTRODUCTION TO FLIP-FLOP CIRCUITS:

Basic Concepts of Sequential Circuits; Cross Coupled SR Flip-Flop Using NAND or NOR Gates; D-Type and Toggle Flip-Flops JK Flip-Flop & race Condition; Clocked Flip-Flops; Master Slave Configuration; Edge triggered D flip-flop; Elimination of Switch Bounce Using Flip-Flops; Flip-Flops With Preset and Clear.

UNIT-V

SEQUENTIAL LOGIC CIRCUIT DESIGN:

Sequential circuit; state table and state diagram; Design procedure; Basic Concepts of Counters and Registers; Shift Left and Right Register; Registers With Parallel Load; Serial-In-Parallel-Out(SIPO) and Parallel-In-Serial-Out(PISO); Register Using Different Type of Flip-Flops; Ripple(asynchronous) counters; Up Down and Mod-N ripple counters; Design of Synchronous Counter Using State Diagrams and State Table; BCD Counters; Modulo-N Counter; Up Down Counter; Ring counter; Johnson Counter, Sequence Generators

Text books:

1. Morris Mano, "Digital Logic And Computer Design", Prentice Hall Of India, 2005 "Digital Electronics", Bignill & Donovan.
2. Jain and Anand : "Digital Electronics", Practice Using Integrated Circuits, TMH, 2004

Reference books:

1. Bartee , Thomas C. / "Fundamentals of Digital Computers"/ Tata McGraw-Hill Englewood Cliffs, N.J. New Delhi : Prentice-Hall, 2009

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2. Gopalan, K. "Gopal" / "Introduction To Digital Microelectronic Circuits" / Tata McGraw-Hill,2004
3. Charles Kime: ""Logic and Computer Design Fundamentals", Pearson Education, 2004.
4. Sandige Richard, "Modern Digital Design", McGraw-Hill, 1990.

List of experiments:

1. Verification of all the logic gates.
2. Analysis of BCD to Excess-3 code converter.
3. Analysis of Half-Adder/Half-Subtractor Circuit using a select input.
4. Analysis of Full -adder/Full-Subtractor circuit using a select input.
5. Analysis of 4-Bit Gray to Binary/Binary to Gray code converter using a select input.
6. Design of Logic expression with the help of MUX. IC 74153.
7. Analysis of Flip-flops using NAND/NOR gate.
8. Analysis and design of Modulo-7 ripple counter.
9. Design of 4-bit shift left/right register.
10. Design of Sequence generator.

Experiments Beyond Syllabus:

1. To study 4 bit ALU(IC 74181).
2. To conduct an experiment to store a set of data in a RAM using IC 2114.

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SEMESTER IV

COURSE EE	CATEGORY	COURSE NAME	TEACHING & EVALUATION SCHEME								
			THEORY			PRACTICAL		L	T	P	CREDITS
			END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
BTEE 403		**POWER SYSTEM-I**	60	20	20	30	20	3	1	2	5

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives:

1. To introduce the concepts and phenomenon of different sources of Power Generation.
2. Give an idea about the fundamental concepts of electrical power distribution, both AC & DC
3. Impart the knowledge of different turbines used in the generating stations.

Course Outcomes:

1. Explain mechanical design of transmission line.
2. Calculation of line parameters (Resistance, inductance and capacitance)
3. Compare DC and AC distribution.
4. Explain the representation of different power system components and loading capability of a generator.
5. Describe underground cables.

Syllabus:

UNIT I

Electrical Energy Generation: General background, structure and components of power network Steam/ Thermal Power Plant, Hydel Power Plant, Nuclear Power plant. Non-conventional & distributed generation, Effect of transmission voltage on power system economy. Isolated & interconnected power system. Power Plant Economics - Load curves, base load, peak load, load factor, demand factor, diversity factor, capacity factor, utilization factor, cost of electricity, capital cost, fuel and operation cost.

UNIT II

Transmission Lines Inductance and capacitance of single-phase, three-phase single circuit and double circuit lines, concept of GMD, transposition of lines, effect of earth on capacitance of transmission lines. Characteristics and performance of transmission lines, transmission lines as four terminal networks, nominal-T, nominal-π, equivalent-T, and equivalent-π representation of transmission lines, A, B, C, D constants, distributed parameters of long lines, hyperbolic solutions, Ferrantii effect, surge impedance loadings.

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SEMESTER IV

UNIT III

Over head lines and cables Type of overhead conductors, solid conductors, stranded conductors, bundled conductors, skin effect, proximity effects, principle of corona Types of cables, insulation resistance of cables, capacitance of cables dielectric stress, capacitance grading of cables, use of inter sheaths

UNIT IV

Main components of overhead lines, conductor materials, line supports, towers, insulators, types of insulators, potential distribution over suspension insulators, string efficiency, methods of improving string efficiency, sag in over head lines, sag and tension calculations, stringing of conductors, sag template, vibration and vibration dampers

UNIT V

Voltage control & Distribution system Ac single phase, 3 phase, 3wire & 4 wire distribution, Kelvin's law for most economical size of conductor Substation layout showing substation equipment, bus bar single bus bar and sectionalized bus bar, main and transfer for bus bar system, sectionalized double bus bar system, ring mains.

Text Books:

1. William Stevenson, Elements of Power System Analysis, McGraw Hill.
2. C.L. Wadhwa, Electrical Power System Analysis, New Age International.
3. D.P. Kothari, I.J. Nagrath, Modern Power System Analysis TMH, III Ed. Reprint 2008.

Reference Books:

1. D.P. Kothari, I.J. Nagrath, Power System Engineering TMH II Ed. Reprint 2009.
2. John Grainger and William Stevenson, Power system Analysis, McGraw Hill.
3. Ashfaq Husain, Electrical Power Systems, Vikas Publishing House.
4. T. Wildi, Electrical Machines, Drives and Power Systems, Pearson Education.
5. C.L. Wadhwa, Generation, Distribution and Utilization of Electrical Energy", New Age International.

List of Practical's:

1. Study and Analysis of Thermal Power plant.
2. Study and Analysis of Hydro Power plant.
3. Study and Analysis of Nuclear Power plant.
4. Study of different types of insulator.
5. Analysis of Ferranti effect and voltage distribution in H.V. long transmission line using transmission line model.
6. Determine the ABCD, H, Z & Image parameters of short transmission line.
7. Determine the ABCD, H, Z & Image parameters of medium transmission line For T network.
8. Determine the ABCD, H, Z & Image parameters for long transmission line.
9. Measure the receiving end voltage of each line under no load or lightly load condition to understand Ferranti effect.
10. Understand the performance of transmission line under different loads with varies Resistive, Inductive, and Capacitive load in different steps.

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Name of Program: B Tech. (Electrical Engineering)

Subject Code	Category	Subject Name	Teaching &Evaluation Scheme								
			Theory			Practical		L	T	P	Credits
			End Sem University Exam	Two Term Exam	Teachers Assessment*	End Sem University Exam	Teachers Assessment*				
BTEE404		Electromagnetic Field Theory	60	20	20	-	-	3	1	-	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Q/A Quiz/Assignment/Attendance, MST Mid Sem Test.

Course Educational Objectives (CEOs):

To lay the foundations of electromagnetism and its practice in modern communications such as wireless, guided wave principles. To provide the basic skills required to understand, develop, and design various engineering applications involving electromagnetic fields.

Course Outcomes (COs):

After the successful completion of this course students will be able to:

1. Use different coordinate system and apply them to solve real time multidisciplinary issues
2. Apply vector calculus to understand the behavior of static electric fields in standard configurations
3. Apply vector calculus to understand the behavior of static magnetic fields in standard configurations
4. Analyze Maxwell's equation in different forms (differential and integral) and apply them to diverse engineering problems
5. Describe and analyze electromagnetic wave propagation in free-space

Syllabus

UNIT I

ELECTROSTATICS – I

Sources and effects of electromagnetic fields – Coordinate Systems – Vector fields –Gradient, Divergence, Curl – theorems and applications - Coulomb's Law – Electric field intensity – Field due to discrete and continuous charges – Gauss's law and applications.

UNIT II

ELECTROSTATICS – II

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Electric potential – Electric field and equipotential plots, Uniform and Non-Uniform field, Utilization factor – Electric field in free space, conductors, dielectrics - Dielectric polarization - Dielectric strength - Electric field in multiple dielectrics – Boundary conditions, Poisson's and Laplace's equations, Capacitance, Energy density, Applications.

UNIT III
MAGNETOSTATICS

Lorentz force, magnetic field intensity (H) – Biot–Savart's Law - Ampere's Circuit Law – H due to straight conductors, circular loop, infinite sheet of current, Magnetic flux density (B) – B in free space, conductor, magnetic materials – Magnetization, Magnetic field in multiple media – Boundary conditions, scalar and vector potential, Poisson's Equation, Magnetic force, Torque, Inductance, Energy density, Applications.

UNIT IV
ELECTRODYNAMIC FIELDS

Magnetic Circuits - Faraday's law – Transformer and motional EMF – Displacement current - Maxwell's equations (differential and integral form) – Relation between field theory and circuit theory – Applications.

UNIT V
ELECTROMAGNETIC WAVES

Electromagnetic wave generation and equations – Wave parameters; velocity, intrinsic impedance, propagation constant – Waves in free space, lossy and lossless dielectrics, conductors- skin depth - Poynting vector – Plane wave reflection and refraction – Standing Wave ratio– Transmission lines – Line equations – transmission line parameters

Text books:

1. Mathew N. O. Sadiku, 'Principles of Electromagnetics', 4 th Edition ,Oxford University Press Inc.First India edition, 2009.
2. Ashutosh Pramanik, 'Electromagnetism – Theory and Applications', PHI Learning Private Limited, New Delhi, Second Edition-2009.
3. K.A. Gangadhar, P.M. Ramanthan ' Electromagnetic Field Theory (including Antennaes and wave propagation', 16th Edition, Khanna Publications, 2007.

Reference Books:

1. Joseph. A.Edminister, 'Schaum's Outline of Electromagnetics, Third Edition (Schaum's Outline Series), Tata McGraw Hill, 2010
2. William H. Hayt and John A. Buck, 'Engineering Electromagnetics', Tata McGraw Hill 8th Revised edition, 2011.
3. Kraus and Fleish, 'Electromagnetics with Applications', McGraw Hill International Editions, Fifth Edition, 2010.
4. Bhag Singh Guru and Hüseyin R. Hiziroglu "Electromagnetic field theory Fundamentals", Cambridge University Press; Second Revised Edition, 2009.

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Name of Program: B Tech. (Electrical Engineering)

Subject Code	Category	Subject Name	Teaching & Evaluation Scheme								
			Theory			Practical		L	T	P	Credits
			End Sem University Exam	Two Term Exam	Teachers Assessment*	End Sem University Exam	Teachers Assessment*				
BTEE405		Computer Application to Electrical Engineering	60	20	20	30	20	2	0	2	3

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Q/A Quiz/Assignment/Attendance, MST Mid Sem Test.

Course Educational Objectives (CEOs): The primary goal is to provide engineering majors with a basic knowledge of numerical methods including: root-finding, elementary numerical linear algebra, integration, interpolation, solving systems of linear equations, curve fitting, and numerical solution to ordinary differential equations. 'C' language is the software environment used for implementation and application of these numerical methods. The numerical techniques learned in this course enable students to work with mathematical models of technology.

Course Outcomes (COs): Upon completion of this course students will be able to:

1. Assess the approximation techniques to formulate and apply appropriate strategy to solve real world problems.
2. Aware of the use of numerical methods in modern scientific computing.
3. Become familiar with finite precision computation.
4. Become familiar with numerical solution of integration, linear equations, ordinary differential equations, interpolations.

Syllabus

UNIT-I

Errors: Errors in Numerical Computation, their types and estimation

UNIT-II

Solution Of Transcendental And Polynomial Equations: Bisection method, Secant Method, Newton Raphson method for Polynomial equation.

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UNIT-III

Solutoin To System Of Linear Algebraic Equations: Gauss elimination method, Gauss Jordon Method, Gauss Seidal Iteration method.

UNIT-IV

Interpolation: Linear interpolation and high order interpolation using Lagrange's and Newton interpolation methods, Finite difference operators and difference tables.

UNIT-V

Numerical Integration: Trapezoidal rule, Simpson's 1/3 and 3/8 rules.

Text Books:

1. Shastri S.S. "introductory Methods of Numerical Analysis", Prentice Hal Ltd, 1977
2. Bajpai A.C. "Numerical Methods for Engineers and Scientists"' John Wiley, 1977

Reference Books:

1. Salaria R.S. "Numerical Methods : A computer oriented approach ", BPS Publicaiotns,1996
2. Teukolsky , S.A. Veterling W.T.& Flannery, B.P." Numerical recipes in "C", 2nd ed, Foundation Books Pvt.Ltd.2001.
3. Balagurusamy E." Numerical Methods", Tata McGraw- Hill , New Delhi,2002

List of Experiments:

1. Deduce relation for error involved in polynomial equation.
2. Identify root of the Algebraic and Transcendental equations using Bisection method.
3. Identify root of the Algebraic and Transcendental equations using Regula-Falsi method.
4. Identify root of the Algebraic and Transcendental equations using Newton-Raphson method.
5. Identify root of the Algebraic and Transcendental equations using Iterative method.
6. Implement Numerical Integration using Trapezoidal rule.
7. Implement Numerical Integration using Simpson 1/3 rule.
8. Implement Numerical Integration Simpson 3/8 rule.
9. Implement Newton"s Forward Interpolation formula.
10. Implement Newton"s Backward Interpolation formula.

Experiments Beyond Syllabus

1. To find the numerical solution of Laplace Equation.
2. Determination of roots of a polynomial.

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Name of Program: B Tech. (Electrical Engineering)

Subject Code	Category	Subject Name	Teaching & Evaluation Scheme								
			Theory			Practical		L	T	P	Credits
		Applied	End Sem University Exam	Two Term Exam	Teachers Assessment*	End Sem University Exam	Teachers Assessment*				
BTMA301	Compulsory	Mathematics-III	60	20	20	-	-	3	1	0	4

Legends: L - Lecture; T - Tutorial/Teacher Guided Student Activity; P – Practical; C - Credit; Q/A Quiz/Assignment/Attendance, MST Mid Sem Test.

Course Objective:
To introduce the students with the Fundamentals of the Calculus of the Complex Variable, Random Variable and Fourier analysis.

Course Outcomes: After the successful completion of this course students will be able to

1. understand and apply the basics of the Calculus of the Complex variables.
2. know the fundamentals of the Probability Theory and Random Process.
3. apply the concepts of the Fourier Analysis
4. know the techniques of the Fourier Transform.
5. find the solution of the PDE.

Syllabus

UNIT I
Complex Analysis
Complex numbers, geometric representation, powers and roots of complex numbers. Functions of a complex variable: Limit, Continuity, Differentiability, Analytic functions, Cauchy-Riemann equations, Harmonic functions, Harmonic conjugates. Elementary Analytic functions (polynomials, exponential function, trigonometric functions), Complex integration, Cauchy's integral theorem, Cauchy's integral formula. Taylor series and Laurent series. Zeros, Singularities and its classifications, Residues, Residue theorem and its applications.

UNIT II
Probability Theory and Random Process
Axiomatic construction of the theory of probability, independence, conditional probability, and basic formulae, random variables, binomial, poisson and normal random variable, probability distributions, functions of random variables; mathematical expectations, Definition and classification of random processes, discrete-time Markov chains, Poisson process, Correlation and Regression; Expectation and Variance

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UNIT III

Fourier series

Fourier Integral, Fourier series of 2p periodic functions, Fourier series of odd and even functions, Half-range series, Convergence of Fourier series, Gibb's phenomenon, Differentiation and Integration of Fourier series, Complex form of Fourier Series.

UNIT IV

Fourier Transformation

Fourier Integral Theorem, Fourier Transforms, Properties of Fourier Transform, Convolution and its physical interpretation, Statement of Fubini's theorem, Convolution theorems, Inversion theorem

UNIT V

Partial Differential Equations

Introduction to PDEs, basic concepts, Linear and non-linear first order PDE, Higher order linear homogeneous PDE, Separation of variable and its application to the one dimensional wave and heat equation.

Text Books:

1. R. V. Churchill and J. W. Brown, Complex Variables and Applications, 5th Edition, McGraw-Hill, 1990.
2. K. Sankara Rao, Introduction to Partial Differential Equations, 2nd Edition, 2005.
3. G. R. Grimmett and D. R. Stirzaker, Probability and Random Processes, Oxford University Press, 2001.
4. P. G. Hoel, S. C. Port and C. J. Stone, Introduction to Probability Theory, Universal Book Stall, 2000.
5. W. Feller, An Introduction to Probability Theory and its Applications, Vol. 1, 3rd Edition, Wiley, 1968.
6. K. S. Trivedi, Probability and Statistics with Reliability, Queuing, and Computer Science Applications, Prentice Hall of India, 1998.
7. A. Papoulis and S. Unnikrishna Pillai, Probabilities, Random Variables and Stochastic Processes, 4th Edition, Tata McGraw-Hill, 2002.
8. S.M. Ross, Stochastic Processes, 2nd Edition, Wiley, 1996.
9. J. Medhi, Stochastic Processes, New Age International, 1994.
10. B. S. Grewal, Higher Engineering Mathematics, Khanna Publishers, Delhi

Reference Books:

1. J. H. Mathews and R. W. Howell, Complex Analysis for Mathematics and Engineering, 3rd Edition, Narosa, 1998.
2. I. N. Sneddon, Elements of Partial Differential Equations, McGraw-Hill, 1957.
3. E. Kreyszig, Advanced Engineering Mathematics, 5th / 8th Edition, Wiley Eastern / John Wiley, 1983/1999

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