## $TSSM's \\ Padmabhooshan Vasant dada Patil Institute of Technology, Bavdhan, Pune-21$ Course Outcomes

## Department of First Year Engineering: Semester –I

CO of the	Course "Engineering Mathematics-1"
COI	Mean value theorems and its generalizations leading to Taylors and Maclaurin's series useful in the analysis of engineering problems
CO2	The Fourier series representation and harmonic analysis for design and analysis of periodic continuous and discrete systems
CO3	To deal with derivative of functions of several variables that are essential in various branches of Engineering
CO4	Find Taylor's and Maclaurian series expansion of differentiable functions and evaluate the limit of moleterminate forms using L'Hospital Rule
CO5	The essential tool of matrices and linear algebra in a comprehensive manner for analysis of system of linear equations, finding linear and orthogonal transformations, Eigen values and Eigen vectors applicable to engineering problems
COS	the essential tool of matrices and mica argeora in a comprehensive matrier for analysis of system of micar equations, mixing micar and orthogonal transformations, Lagen varies and ragen vectors applicance to engineering provents
CO of the	Course "Engineering Physics"
COI	Develop understanding of interference, diffraction and polarization; connect it to few engineering applications
CO2	Learn basics of lasers and optical fibers and their use in some applications.
CO3	Understand concepts and principles in quantum mechanics. Relate them to some applications
CO4	Understand theory of semiconductors and their applications in some semiconductor devices.
CO5	Summarize basics of magnetism and superconductivity. Explore few of their technological applications
CO6	Comprehend use of concepts of physics for Non Destructive Testing. Learn some properties of nanomaterials and their application.
CO of the	Course "Engineering Chemistry"
COI	Particularly Control of the Control
	To understand technology involved in analysis and improving quality of water as commodity
CO2	To acquire the knowledge of electro-analytical techniques that facilitates rapid and precise understanding of materials.
	To understand structure, properties and applications of speciality polymers and nano material
CO4	To study conventional and alternative fuels with respect to their properties and applications.
CO5	To study spectroscopic techniques for chemical analysis
CO6	To understand corrosion mechanisms and preventive methods for corrosion control.
CO of the	Course "- Systems in Mechanical Engineering"
COI	Describe and compare the conversion of energy from renewable and non-renewable energy sources
CO2	Explain basic laws of thermodynamics, heat transfer and their applications
CO3	List down the types of road vehicles and their specifications
CO4	Illustrate various basic parts and transmission system of a road vehicle
CO5	Discuss several manufacturing processes and identify the suitable process
CO6	Explain various types of mechanism and its application
CO of the	Course "Basic Electronics Engineering"
COI	The principle of electronics and working principle of PN junction diode and special purpose diodes.
CO2	The functioning of transistors like BJT, MOSFETs and OPAMP.
CO3	Basics of various logic gates, digital circuits and their applications.
CO4	Working and functions of various electronic instruments.
COS	
-03	The operating principles and applications of various active and passive sensors.
CO6	
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CO6  CO of the  CO1  CO2  CO3  CO4  CO5	The operating principles and applications of various active and passive sensors.  Bakes principles of communication systems.  Course "Basic Electrical Engineering"  Differentiate between electrical and magnetic circuits and derive multientatical relation for self and metod inductance along with coupling effect.  Calculate series, parallel and compositic opposition as well as dataseteristics, parameters of alternating quantity and photor arithmetic.  Differentiate between electrical and magnetic circuits and derive multientatical relation for self and metod inductance along with coupling effect.  Calculate series, parallel and compositic opposition as well as dataseteristics, parameters of alternating quantity and photor arithmetic.  Differentiate between electrical quantities in polyhous networks and proposition of single photor arithmetic.  Relate phase and line electrical quantities in polyhous networks, demonstrate the operation of single photo transformer and calculate efficiency and regulation at different locating conditions.  Approx and analyse the resisten circuits using the delete conversion of single photo transformer and calculate efficiency and regulation at different locating conditions.  Approx and analyse the resisten circuits using the delete conversion of single photo transformer and calculate efficiency and regulation at different locating conditions.
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CO of the	Course "Engineering Mechanics"
COI	Determine resultant of various force systems
	Determine centroid, moment of inertia and solve problems related to friction
	Determine reactions of beams, calculate forces in cables using principles of equilibrium
CO4	Solve trusses, frames for finding member forces and apply principles of equilibrium to forces in space
CO5	Calculate position, velocity and acceleration of particle using principles of kinematics
CO6	Calculate position, velocity and acceleration of particle using principles of kinetics and Work, Power, Energy
CO of the	Course "Workshop Practice"
co or the	Course Trivianing Listing
COI	
	Familiar with safety norms to prevent any mishap in workshop.
CO2	Able to handle appropriate hand tool, cutting tool and machine tools to manufacture a job.
CO3	Able to understand the construction, working and functions of machine tools and their parts.
CO4	Able to know simple operations (Turning and Facing) on a centre lathe.
CO of the	Course "Engineering Graphics"
COI	
	Draw the fundamental engineering objects using basic rules and able to construct the simple geometries
CO2	Construct the various engineering curves using the drawing instruments.
CO3	Apply the concept of orthographic projection of an object to draw several 2D views and its sectional views for visualizing the physical state of the object
CO4	Apply the visualization skill to draw a simple isometric projection from given orthographic views precisely using drawing equipment
CO5	Draw the development of lateral surfaces for cut section of geometrical solids
	Draw fully-dimensioned 2D, 3D drawings using computer aided drafting tools.
n	nt of Mechanical Engineering
Semester -	
CO of the	Course "Engineering Mathematics-III"
COI	Solve higher order linear differential equations and its applications to modeling of mass spring systems with free and forced Damped and Un-damped systems
	Use Larlace Transform and Fourier transform techniques to solve differential equations involved in vibration theory, heat transfer and related engineering amplications
CO3	Coc Lajonic Hamstonia and Fourier Lambourier Control of the Cock Lajonic Hamstonia (Lagonic Hamstonia Lagonic Hamstonia
CO4	
	Apply concept of vector differential calculus to fluid mechanics and various engineering applications.
CO5	Apply knowledge of vector integral calculus to fluid mechanics and various engineering applications
CO6	Solve various partial differential equations like one dimensional diffusion and wave equations, one and two dimensional heat equations
CO of the	Course "Strength of Material"
COI	Apply knowledge of mathematics, science for engineering applications
	Design and conduct experiments, as well as to analyze and interpret data
CO3	Design a component to meet desired needs within realistic constraints of health and Safety
	Identify, formulate, and solve engineering problems
CO5	Practice professional and ethical responsibility
CO6	Use the techniques, skills, and modern engineering tools necessary for engineering Practice
CO of the	Course "Material Science"
col	
	Explain the mechanism of plastic deformation
CO2	Understand the basic concepts and properties of Material, material fundamental and processing
CO2 CO3	Understand the basic concepts and properties of Material, material fundamental and processing  Define the mechanical properties of materials and conduct destructive and non destructive tests to evaluate and test the properties of materials
CO2 CO3	Understand the basic concepts and properties of Material, material fundamental and processing
CO2 CO3 CO4	Understand the basic concepts and properties of Material, material fundamental and processing  Define the mechanical properties of materials and conduct destructive and non destructive tests to evaluate and test the properties of materials
CO2 CO3 CO4 CO5	Understand the basic concepts and properties of Material, material fundamental and processing  Define the mechanical properties of materials and conduct destructive and non destructive tests to evaluate and test the properties of materials  Solest proper metal, alloy, nonmertal and powder metallurgical component for specific requirement  Detect the defects in revstal and its effect on crystal properties. Evaluate the different properties of material by studying different test
CO2 CO3 CO4 CO5 CO6	Understand the basic concepts and properties of Material, material fundamental and processing  Delifie the mechanical properties of materials and conduct destructive and non destructive tests to culturate and test the properties of materials  Select proper metal, alloys, nonmetal and prooder metallurgical component for specific requirement  Detect the deletes in crestal and in effect on crestal properties. Evaluate the different processing of material by studying different test  Recognize how mental can be strengthened by cold-working and how working
CO2 CO3 CO4 CO5 CO6 CO7	Understand the basic concepts and properties of Materials, material fundamental and processing  Define the mechanic properties of materials and conduct destinates and no destructive states to evaluate and test the properties of materials.  Select proper metal, allow, nomental and proude metallurgical component for specific requirement  Destret the defects in several and in effects or consist processing the service of materials.  Recognitive how metals can although the consistency of the service of material by stashing different test.  Recognitive now metals can although the consistency of the service of the service of material by stashing different test.
CO2 CO3 CO4 CO5 CO6 CO7 CO8	Lindentand the basic concepts and properties of Material, material findamental and processing  Delifie the mechanic prompties of materials and conduct detentioned and no destruct testioned and prouder metallularies of expectific requirement  Detect the delects in crevals and to reflect on crevial properties. Evaluate the different processins of material by studying different test  Recognize from wealth can be strengthened by cold-working and the verting  Detect and explain equilibrium diagrams for various allow vertines  Indentinal various temperationing mechanics.
CO2 CO3 CO4 CO5 CO6 CO7 CO8 CO9	Understand the basic concepts and properties of Materials, material fundamental and processing Define the mechanic properties of materials and conduct destinates and no destructive stress to evaluate and test the properties of materials Select proper metal, allow, nomental and protein engineering and conductive destinates and non-destructive stress to evaluate and select series. Select proper metal, allow, nomental and protein engineering components for specific requirement Destructive destinates and selective stress and selecti
CO2 CO3 CO4 CO5 CO6 CO7 CO8 CO9 CO10	L'informant due basic concepts and properties of Material, material findamental and processing  Definé the mechanic protenties of materials and conduct destanctive and no effectories tests to estudies and test the properties of materials  Solicit proper metal, alloys, numeral and powder metallulgical component for specific requirement  Detect the defects in crevatal and in seffect on crevatal properties. Evaluate the different properties of material by studying different test  Recognize how metals can be strengthened by colds working and he working  Dow and explain equilibrium diagrams for various allow visetime  Undermand various intergediening mechanisms  Describe unious promoteries with a new sketch and explain their working and application  Indentural corrosion and auguset various means to prevent corrosion.
CO2 CO3 CO4 CO5 CO6 CO7 CO8 CO9 CO10	Understand the basic concepts and properties of Materials, material fundamental and processing Define the mechanic properties of materials and conduct destinates and no destructive stress to evaluate and test the properties of materials Select proper metal, allow, nomental and protein engineering and conductive destinates and non-destructive stress to evaluate and select series. Select proper metal, allow, nomental and protein engineering components for specific requirement Destructive destinates and selective stress and selecti
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CO2 CO3 CO4 CO5 CO6 CO7 CO8 CO9 CO10	L'informatur the basic concepts and properties of Material, material findamental and processing  Delité the mechanic precenties of material and conduct destructive and me destructive tests to-culaure and test the properties of materials  Select proper metal, allows, nomental and powder metallingical component for specific requirement  Detect the defects in crystal and in sefect on crystal properties. Evaluate the different properties of material by studying different test  Recognize from renath can be entemplaced by cold-working and how working  Down and explain equilibrium diagrams for various allow various.  Detected working and properties with a new darked and explain their working  Describe various proposeties with a new darked and explain their working and application  Hardward corrosion and suspect various means to prevent cereorision  Explain various aspects of prouder metallarge.
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CO of the	Course "Heat Transfer"
CO I	Analyze the various modes of heat transfer and implement the basic heat conduction equations for steady one dimensional thermal system.
CO 2 CO 3	Implement the general heat conduction equation to thermal systems with and without internal heat generation and transient heat conduction.  Analyze the heat transfer rate in matural and forced convection and evaluate through experimentation investigation.
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CO 5	Analyze the heat transfer equipment and investigate the performance.
CO of the	Course "Design of Machine Element-1"
CO I	Additions analyses the course of Machine Plannate to analysis of Machine Plannate to analysis of the following the course of the
CO 2	Ability to analyze the stress-strain, of Machine Elements to understand, identify, quantify the failure modes.  Ability to Design Power Screw for Various Applications.
CO 3	Ability to design fasteners and welded joints subjected to different loading conditions.
CO 4	Ability to design various Springs for strength and stiffness.
CO 5	Select standard data and components by using Design Data Books, Codes and Standards for avoiding failure of machine components.
CO of the	Course "Turbo Machinery"
CO of the	Course Turno Maximery
COI	Classify turbo machines along with its applications and discuss impulse momentum principle to evaluate performance parameters for flat, inclined plate, curved vane and series of vanes.
CO2	Analyze impulse water turbine with design aspects, selection criteria, performance parameters and characteristics for its use in hydroelectric power plant
CO3	Differentiate reaction water turbines, draft tube types, governing mechanism, with design aspects, selection criteria and determine performance parameters and characteristics
	Discuss steam nozzle, impulse, and reaction steam turbine with governing mechanism, selection criteria, losses and evaluate performance parameters for its use in thermal power plant.  Classifyotodynamic, centrifugal pump, heads, cavitation, priming, along with multi staging, system resistance curve and evaluate performance with design aspects and selection criteria for household and industrial application.
	Discuss the construction and working of centrifugual and axial flow compressors with its analysis.
CO of the	Course "Dynamic of Machinery"
COI	
	Implement balancing technique to complete balancing of rotating & reciprocating masses in multi cylinder inline & radial engines.  Express the fundamentals of vibrations and estimate natural frequencies for single DOF un-damped and damped free vibratory systems.
	Formulate analytical competency to judge the response to forced vibrations due to harmonic excitation, base excitation and excitation due to reciprocating and rotary unbalance
CO4	Formulate mathematical model and estimate natural frequencies, mode shapes (Eigen values and Eigen vectors) for DOF undamped free longitudinal and transverse vibratory systems.
CO5	Choose suitable vibration measuring instrument for industrial / real life applications and select suitable method for vibration control
CO6	Interpret noise, its measurement and reduction techniques for industry and day to day life problems
CO of the	Course "CADCAM and Automation"
COI	Discuss Concept of computer graphics and find the transformations for 2 dimensional elements.
	Explain Analytically different types of curves, surfaces and solids and modeling the same for 2D/3D conditions.
CO3 CO4	Analyse conditional safety of given component using FEA.  Select CNC media and develop CNC pler program for given work piece.
CO5	Societ A.M. Raeside Pandavejeig et A.N. raen program num faverant was a first establishment of the Company of t
	Explain industrial automation in view of Robotic votem, CM, CAPP.
CO of the	Course "Operation Research"
COI	Illustrate the need to optimally utilize the resources in various types of industries
CO2	Apply and analyze mathematical optimization functions to various to various to the control of th
	Demonstrate cost effective strategies in various applications in industry
CO4	Analyze the Dynamic and integer programming and apply them for arriving at optimal decisions
CO of the	Course "Refrigeration and Air Conditioning"
COI	Demonstrate the fundamental Principles of Thermodynamics and working principal of R.A.C. methods
CO2	Analyze the performance of the different Refrigeration cycle using P-h chart & property table & select appropriate for application.
	Select the appropriate refrigerant with respect to properties, application & environmental issues by comparative study.
	зенех ше арриодыме тентерелан with respect to properties, аррисанов ас сичтовшения взямех му сопрывануе мину.
CO4	Analyze & Design appropriate air-conditioning system for any application
CO4 CO5	Analyze & Design appropriate air-conditioning system for any application  Illustrate and analyze the principles and working of various equipment & safety controls & select in RAC system
CO4 CO5 CO6	Analyse & Design appropriate air conditioning system for any application  Blastrate and analyse the misriples and worsing of visions conjument & select controls & select in RAC system  Demonstrate that system design methods by solving simple numerical.
CO4 CO5 CO6	Analyze & Design appropriate air-conditioning system for any application  Illustrate and analyze the principles and working of various equipment & safety controls & select in RAC system
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CO3 CO5 CO5 CO6 CO6 CO6 CO7	Analyse & Design appropriate air conditioning system for any application  Barness and analyse the misriels and working of visions equipment & select controls & select in RAC system  Demonstrate dust system design and methods by solving simple numerical.  Correc "Berray Analit and Management"  Carry on Energy Analit and Management"  Carry on electrical radi colustation and security profest the descrictly bill required for the installation.  Suggest various methods to reduce energy consumption of the equipment / office / premises.  Carry on electrical radi colustation and security profest the descrictly bill required for the installation.  Suggest various methods to reduce energy consumption of the equipment / office / premises.  Carry of electrical radial colustation and security profest the descrictly bill required for the installation.  Suggest various methods to reduce energy consumption of the equipment / office / premises.  Carry of colorical radial reductions of the equipment / office / premises.  Selection of appropriate manufacturing process for advance components.  Carry Product Design and Drychopment*  Design a sustainable product.  Design a sustainable product.  Design as restainable product.  Matter in ages techniques FLM and FDM  and of Machanical Engineering  If our Product Design of Machanisms and solve of advance components.  Design as natural product.  Matter in ages techniques FLM and FDM  And of the Machanical Engineering  If our Product Design of the design of the continue mechanism.  Perform such country of miscrotron of mischosisms they sector and graphical methods.  Course "Engineering Metallarry."
CO4 CO5 CO5 CO6 CO6 CO6 CO6 CO7	Analyse & Design appropriate aris conditioning system for any application  Bentrate and analyse the principles and working of various aquinates & skeley controls & select in RAC system  Demonstrate duct votam design methods by solving simple numerical.  Correc "Energy Andri and Management"  Carry out Entering Andri and Management"  Carry out Entering the disclosion and accountage predict the descrivity bill required for the installation.  Suggest various methods for reduce energy consumption of the equipment / office / premises  Correc "Advanced Management greeces"  Selection of appropriate measurement predicts the descrivity bill required for the installation.  Solection of appropriate measurement schalages in micromochining  Course "Product Design and Development"  Descript on the including Product.  Develop commercial Product.  Develop commercial Product.  Moster in one includings FAM and FDM  and of Machanical Engineering  If Course "Product Machanical Engineering In Product.  Best of Machanical Engineering  If Course "Product Machanical Engineering Machanican Development (Indicated Engineering Machanical
CO4 (CO5) CO5 (CO5) CO6 (CO5) CO6 (CO5) CO7 (C	Analyse & Design appropriate air conditioning system for any application  Barness and analyse the misriels and working of visions equipment & select controls & select in RAC system  Demonstrate dust system design and methods by solving simple numerical.  Correc "Berray Analit and Management"  Carry on Energy Analit and Management"  Carry on electrical radi colustation and security profest the descrictly bill required for the installation.  Suggest various methods to reduce energy consumption of the equipment / office / premises.  Carry on electrical radi colustation and security profest the descrictly bill required for the installation.  Suggest various methods to reduce energy consumption of the equipment / office / premises.  Carry of electrical radial colustation and security profest the descrictly bill required for the installation.  Suggest various methods to reduce energy consumption of the equipment / office / premises.  Carry of colorical radial reductions of the equipment / office / premises.  Selection of appropriate manufacturing process for advance components.  Carry Product Design and Drychopment*  Design a sustainable product.  Design a sustainable product.  Design as restainable product.  Matter in ages techniques FLM and FDM  and of Machanical Engineering  If our Product Design of Machanisms and solve of advance components.  Design as natural product.  Matter in ages techniques FLM and FDM  And of the Machanical Engineering  If our Product Design of the design of the continue mechanism.  Perform such country of miscrotron of mischosisms they sector and graphical methods.  Course "Engineering Metallarry."
CO4 of the:  CO of	Analyse & Design appropriate air conditioning system for any application  Bernest and analyse the neither desired source of source of source of the source o
CO4 of the:  CO of	Analyse & Design appropriate art conditioning system for any application  Demonstrate and analyse the principles and working of various aquinement & safety controls & select in RAC system  Demonstrate duct votem design methods by solving simple numerical.  Course "Energy Andri and Management"  Carry out festivated utilif clockulation and accountably predict the description of the installation.  Suggest voted established and constraints of the captionest / office / premises.  Course "Andriance Management"  Course "Andriance Management"  Selection of appropriate unaccurrental predicts the description of the equipment / office / premises.  Selection of appropriate manufacturing process for aboute components.  Course "Andriance Management underlying process for aboute components.  Course "Product Design and Development"  Course "Product Design and Development"  Design a management Product.  Develop comments of Product.  Motor in one techniques TAM and FFOM  Andre or the most coloniques TAM and FFOM  Andre or the most coloniques TAM and FFOM  Andre or the techniques TAM and FFOM  Course "Through and Machines!"  Selection of appropriate management products and the product of the control of the
CO of the CO of	Analyse & Design appropriate air conditioning system for any application  Bernest and analyse the neither design design design of various againsteen & safety controls & select in RAC cystem  Demonstrate deat cystem design methods by solving simple numerical.  Correc Tearry Analit and Management"  Carry on Electrical reductation and accountary predict the electricity bill required for the installation.  Suggest various methods for residence / assettiv / college where they are studying  Carry on electrical reductation and accountary predict the electricity bill required for the installation.  Suggest various methods to reduce energy consumption of the equirement / effice / promises.  Correc *Advanced Manafesturing Procesc*  Selection of appropriate manufacturing process for advance components  Characterization of work pieces  Selection of appropriate manufacturing process for advance components  Characterization of work pieces  Selection of appropriate measurement techniques in micromachining  Correc *Product Design and Development*  Design a sustainable product.  Design a sustainable product.  Moster in new techniques PLM and PDM  at of Mechanical Engineering  Matter in new techniques PLM and PDM  Method of the product of the produc

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CO of the	"Fluid Mechanic"
COI	Describe and determine various properties of fluid for operating conditions encountered in fluid engineering problems
	Determine total pressure and couple exerted by static fluid on plane and curved surfaces encountered in dam structures and stability of floating objects.
CO3	Describe various types of flows and their physics and determine velocity, acceleration, stream function and velocity potential at any point in a flow field to recognize conditions of possibility of fluid flows.
	Discuss physics and the governing equations associated with laminar and turbulent flows to analyse and design flow measuring devices and pipe flow system.
CO5 CO6	Discuss physics of laminar and urbulent flows in external flow to determine drug and lift forces on surfaces of stationary and moving objects.  Discuss physics of laminar and urbulent flows in external flow to determine drug and lift forces on surfaces of stationary and moving objects.  Discuss physics of laminar and urbulent flows in external flow to determine drug and lift forces on surfaces of stationary and moving objects.
COG	Develop mathematical correlation for complex flow phenomenon in terms of dimensionless parameters.
CO of the	Course "Applied Thermodynamics"
	Classify LC engines construction and materials used, working principle and explain losses encountered in fuel air and actual cycle.
CO2 CO3	Analyze requirements of carburation, stages of combustion in SI engines, theory of abnormal combustion and combustion chambers for SI engine.
	Evaluate field injection system, stages of combustion in Cl engines, theory of abnormal combustion and combustion chambers for Cl engine.  Fivultate performance of IC engines and results of the tests.
	Explain systems necessary for efficient operation of K engines and get familiar with emissions, norms and controlling techniques.
CO6	Explain the classification and working of air compressors and evaluate the performance of reciprocating air compressor.
CO of the	Course "Elements of Electrical Engineering"
COI	Develop the capability to identify and select suitable DC motor / induction motor / special purpose motor and its speed control method for given industrial application.
	Program Arduino IDE using conditional statements
CO3	Interfacing sensors with Arduino IDE
CO of the	Course "Manufacturing Process-II"
COurtile	-suive statutacturing riveess-ti
COI	Student should be able to apply the knowledge of various manufacturing processes.
CO2	Student should be able to identify various process parameters and their effect on processes.
CO3	Student should be able to figure out application of modern machining.
CO4	Students should get the knowledge of Jigs and Fixtures for variety of operations
CO of the	Course "Design of Machine Element-II"
COl	To understand and apply principles of gear design to spur gears and industrial spur gear boxes.
CO2 CO3	To become proficient in Design of Helical and Bevel Gear.  To develop capability to analyze Rolling contact bearing and its selection from manufacturer's Catalogue.
CO4	To develop caponiny to manyze noting contact central guidant subsection from manufacturer's Catalogue.  To develop caponiny to manyze noting contact central guidant subsection from manufacturer's Catalogue.  To learn a skill to design wom general post for various institution applications.
	To inculcate that to desting to desting seed on the destination of belt drives and selection of belt, rope and chain drives.
CO6	To achieve an expertise in design of Sliding contact bearing in industrial applications.
CO of the	Course "Refrigeration and Air Conditioning"
COI	Demonstrate the fundamental Principles of Thermodynamics and working principal of R.A.C. nethods
	Analyze the performance of the different Refrigeration cycle using P-h chart & property table & select appropriate for application.
CO3	Select the appropriate refrigerant with respect to properties, application & environmental issues by comparative study.
	Analyze & Design appropriate air-conditioning system for any application
CO5 CO6	Illustrate and analyze the principles and working of various equipment & safety controls & select in RAC system  Demonstrate dux system design methods by solving simple americal.
COG	Demanstrate unct system uestign memoras by solving simple mamerican.
CO of the	Course "Mechatronics"
	Identification of key elements of mechatronics system and its representation in terms of block diagram
	Understanding the concept of signal processing and use of interfacing systems such as ADC, DAC, digital I/O
CO3	
CO3 CO4	Interfacing of Sensors, Actuators using appropriate DAQ micro-controller  Time and Frequency domain analysis of system model (for control application)
CO4 CO5	Time and Frequency domain analysis of system model (for control application) PID control implementation on real time systems
CO4	Time and Frequency domain analysis of system model (for control application)
CO4 CO5 CO6	The and Fragency domain analysis of system model (fire content application)  Development of FLC ladder recognition on real time view model (fire content application)  Development of FLC ladder recognitioning and implementation of real life system.
CO4 CO5 CO6	Time and Frequency domain analysis of system model (for control application) PID control implementation on real time systems
CO4 CO5 CO6 CO of the	Time and Frequency domain analysis of system model (for control application)  Development of FLC ladder programming and implementation of real life system.  Course "Numerical Methods and Optimization"  Evaluate the root of equations and simultaneous equations in engineering applications using iterative approach with minimized error.
CO4 CO5 CO6 CO of the C	Time and Frequency domain multivist of system model (for control application)  [PD count implementation on real time systems  Development of PLC ladder programming and implementation of real life systems.  [Course "A memorical Methods and Optimization"  [Evaluate Two roots of equations and simultaneous equations in engineering applications using iterative approach with strinintand error.  Apply applieds, surpass and Vestor's continuation method to solve constrained and succonstrained problems.
CO4 CO5 CO6 CO of the C CO1 CO2 CO3	Time and Frequency domain analysis of system model (for control application)  Development of PLC ladder programming and implementation of real life system.  Development of PLC ladder programming and implementation of real life system.  Course "Numerical Methods and Optimization"  Finduct the roots of equations and simultaneous equations in engineering applications using iterative approach with minimized error.  Apply angulosis, simples and Newton's equitimization method to solve constrained and unconstrained problems.  Apply Language's, Newton's forewait unterpolation method for solving engineering problems, and if different curves by least square technique.
CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4	Time and Frequency domain multivist of system model (for control application)  [PD count implementation on real time systems  Development of PLC ladder programming and implementation of real life systems.  [Course "A memorical Methods and Optimization"  [Evaluate Two roots of equations and simultaneous equations in engineering applications using iterative approach with strinintand error.  Apply applieds, surpass and Vestor's continuation method to solve constrained and succonstrained problems.
CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4	Time and Frageness domain analysis of system model (for control application)  PD counted implementation on real time systems  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of real life systems.  Development of PLC ladder programming and implementation of PLC ladder programmi
CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO6	Time and Frequency domain analysis of system model (for control applications)  Development of P.L. Indider programming and implementation of real life system.  Development of P.L. Indider programming and implementation of real life system.  Course "Numerical Methods and Optimization"  Evaluate the roots of equations and simultaneous equations in engineering applications using iterative approach with minimized error.  Apply transferd, integles and Newton's continuation method to solve constrained and succonstrained residem.  Apply Lagragin's, Newton's forewall integration method for solving expecting problems, and it different surves by least square technique.  [Bestles significancy of numerical integration in engineering problems, and evaluate integration of functions using single and double integration inchingues.  Apply methods economic in engineering problems, and evaluate integration of functions using single and double integration inchingues.  Develop recurrenting basic for solving engineering problems using numerical methods.
CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO6	Time and Frequency domain analysis of system model (for control applications)  Development of PLC ladder programming and implementation of real life system.  Development of PLC ladder programming and implementation of real life system.  Currer "Namerical Methods and Optimization"  Evaluate the roots of equations and simultaneous equations in engineering applications using iterative approach with retininated error.  Apply trappical, simples and Newton's equitination method for solving engineering professor, and all different successor for the control of the system of the different squares of the system of the different squares of functions using and additional engineering professor, and it different survey by learn square technique.  Results significance of numerical altergration is engineering professor, and evaluate integration of functions using a single and double integration techniques.  Apply unchade occurred in engineering professor, and evaluate integration of functions using a single and double integration techniques.  Apply unchade occurred in engineering professor, and evaluate integration of functions using a single and double integration techniques.
CO4 CO5 CO6 CO of the CO2 CO3 CO4 CO5 CO6 CO6 CO7	Time and Frequency domain analysis of system model (for control application)  Proceedings of PLC ladder reorganismics and implementation of real life system.  Development of PLC ladder reorganismics and implementation of real life system.  Fourse "Numerical Methods and Optimization"  Fourse "Numerical Methods and Optimization of the optimizatio
CO4 CO5 CO of the cO1 CO2 CO3 CO4 CO5 CO of the cO5 CO of the cO5 CO of the cO1 CO2 CO3 CO3 CO4 CO5 CO6 CO of the cO1 CO2	Time and Frequency domain analysis of system model (for control application)  Proceedings of PLC ladder reorganising and implementation of real life system.  Development of PLC ladder reorganising and implementation of real life system.  Fourte "Numerical Methods and Optimization"  Evaluate the roots of equations and simultaneous equations in engineering applications using iterative approach with minimized error.  Aprile amplification and Newton's estimation method for solving engineering policies. and in different corts of equations and simultaneous equations in engineering applications using iterative approach with minimized error.  Aprile amplification and Newton's estemation application method for solving engineering policies. and if different corts by learning as, Newton's foreneal interplation method for solving engineering policies. and for different corts by learning as (Newton's foreneal interplation method for solving engineering policies. and evaluate integration of functions using single and double integration techniques.  Apply methods encounted in engineering practices to solve endingent expensions (DOD) and partial differential equations (PDE).  Develop reorganisms glocic for solving engineering problems, used evaluate integration in expensions of the control o
CO4 CO5 CO6 CO of the c CO1 CO2 CO3 CO4 CO5 CO6 CO of the c CO of the c CO of the c CO1 CO2 CO3	Time and Frequency domain analysis of system model (for control application)  PDE control implementation on real time systems  Development of PLC holder programming and implementation of and life systems.  Development of PLC holder programming and implementation of and life systems.  Evaluate the roots of equations and simultaneous equations in engineering applications using iterative approach with minimized errors.  Apply Lagrage's, Newton's ferror and interpolation method for solving engineering applications using iterative approach with minimized errors.  Apply Lagrage's, Newton's ferror and interpolation method for solving engineering problems, and fit affirms curve by least square technique.  Belletist startification of unteriesal interpolation in engineering problems and eshabets interpolation engineering problems and eshabets interpolation (Incrinos using and adouble interpolate).  Development of the control and interpolation problems design and eshabets interpolated and double interpolates.  Development of the control and interpolation problems are design and eshabets interpolated and double interpolates.  Development of the supplication problems are design and eshabets interpolated and double interpolates.  Development of the supplication problems are design and eshabets interpolated and double interpolates.  Development of the supplication problems are design and partial differential equations (PDE).  Development "Mechanical System Design"  The student will understand the difference between component level design and system level design.  Ability to design writems mechanical systems recept design and your new design.
CO4 CO5 CO6 CO of the c CO1 CO2 CO3 CO4 CO5 CO6 CO of the c CO of the c CO of the c CO1 CO2 CO3	Time and Frequency domain analysis of system model (for control application)  Proceedings of PLC ladder reorganising and implementation of real life system.  Development of PLC ladder reorganising and implementation of real life system.  Fourte "Numerical Methods and Optimization"  Evaluate the roots of equations and simultaneous equations in engineering applications using iterative approach with minimized error.  Aprile amplification and Newton's estimation method for solving engineering policies. and in different corts of equations and simultaneous equations in engineering applications using iterative approach with minimized error.  Aprile amplification and Newton's estemation application method for solving engineering policies. and if different corts by learning as, Newton's foreneal interplation method for solving engineering policies. and for different corts by learning as (Newton's foreneal interplation method for solving engineering policies. and evaluate integration of functions using single and double integration techniques.  Apply methods encounted in engineering practices to solve endingent expensions (DOD) and partial differential equations (PDE).  Develop reorganisms glocic for solving engineering problems, used evaluate integration in expensions of the control o
CO4 CO5 CO6 CO of the cO5 CO6 CO of the cO5 CO5 CO6 CO of the cO5 CO6 CO of the cO5 CO6 CO1 CO2 CO3 CO4 CO1 CO2 CO3 CO4 CO1 CO2 CO3 CO4 CO1 CO2 CO3 CO4	Time and Frequency domain analysis of system model (for control application)  PDE control implementation on real time systems  Development of PLC holder programming and implementation of and life systems.  Development of PLC holder programming and implementation of and life systems.  Evaluate for roots of equations and simultaneous equations in engineering applications using iterative approach with minimized errors.  Apply Language's, Newton's forward interpolation method to solve constrained and unconstrained problems.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if it different curves by least square technique.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if it different curves by least square technique.  Apply substitution of unterteal interpolation method for solving engineering problems, and if it different curves by least square techniques.  Apply substitution of unterteal interpolation regiments problems and eshabits interpolated and double interpolate.  Apply substitution of unterteal interpolation problems and eshabits interpolated and double interpolate.  Development and problems in engineering problems and eshabits interpolated and double interpolate techniques.  Apply substitution of the interpolation of the engineering problems and eshabits of techniques and double interpolated and techniques.  Development and the difference between component level design and system level design.  Ability to design writen mechanism enchantical components.  Ability to be design substitution and exply in to mechanical components.  Ability to the application of the property of the engineering problems and the property of the property to produce and the property of the property to mechanical components.
CO4 CO5 CO6 CO of the CO5 CO6 CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO2 CO2 CO3 CO4 CO4 CO5 CO6 CO1 CO2 CO3 CO4 CO5 CO5 CO6 CO6 CO7	Time and Frequency domain analysis of system model (for control application)  PDE control implementation on real time systems  Development of PLC holder programming and implementation of and life systems.  Development of PLC holder programming and implementation of and life systems.  Evaluate the roots of equations and simultaneous equations in engineering applications using iterative approach with minimized errors.  Apply Lagrage's, Newton's ferror and interpolation method for solving engineering applications using iterative approach with minimized errors.  Apply Lagrage's, Newton's ferror and interpolation method for solving engineering problems, and fit affirms curve by least square technique.  Belletist startification of unteriesal interpolation in engineering problems and eshabets interpolation engineering problems and eshabets interpolation (Incrinos using and adouble interpolate).  Development of the control and interpolation problems design and eshabets interpolated and double interpolates.  Development of the control and interpolation problems are design and eshabets interpolated and double interpolates.  Development of the supplication problems are design and eshabets interpolated and double interpolates.  Development of the supplication problems are design and eshabets interpolated and double interpolates.  Development of the supplication problems are design and partial differential equations (PDE).  Development "Mechanical System Design"  The student will understand the difference between component level design and system level design.  Ability to design writems mechanical systems recept design and your new design.
CO4 CO5 CO6 fthe CO1 CO2 CO3 CO4 CO5 CO6 CO6 fthe CO5 CO6 CO7	Time and Frequency domain analysis of system model (for control applications)  Decloration inplementation on seal time systems  Decloration of PLC ladder programming and implementation of real life systems  Declorated of PLC ladder programming and implementation of real life systems  Declorated in PLC ladder programming and implementation of real life systems  Evaluate for most of quantism and simultaneous equations using intensive approach with minimized error.  Replay angulosis, insteads and Nectors's configuration models of low nontraced and succonstrained problems.  Apply Language's, Nectors's forward interpolation method for solving engineering problems, and fit different curves by least square techniques.  Replay language's, Nectors's forward interpolation method for solving engineering problems, and fit different curves by least square techniques.  Replay included a consorted in suggesting practices to solve endanges differented equations (ODD) and partial differential equations (ODE).  Declorate "Mechanical System Declops"  Course "Mechanical System Declops"  Ability to design witness make their language in the problems of t
CO4 CO5 CO6 CO of the cos CO1 CO2 CO3 CO4 CO5 CO6 CO of the cos CO1 CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5 CO6 CO of the cos CO1 CO2 CO3 CO4 CO5 CO6 CO of the cos CO6 CO7	Time and Frequency domain analysis of system model (for contral application)  Plot course implementation on and intersystem  Development of PIC labder programming and implementation of real life systems.  Development of PIC labder programming and implementation of real life systems.  For the course of picture of the programming and implementation of real life systems.  For the course of systems and systems or implementation in engineering papellications using iterative approach with minimized error.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if in different arrows by least square technique.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if sufferent arrows by least square technique.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if sufferent arrows by least square technique.  Apply analysis of solving engineering problems and evaluate interpolation of functions using anised and double interpolation excludinges.  Apply analysis for solving engineering problems using numerical methods.  **Course "Mechanical System Design"**  The student will understand the difference between component level design and system level design.  Ability to take any method apply in the ordinational components.  Ability to the any minimum method projective plan and apply in to mechanical components.  Ability to the any minimum method projective plan and apply in to mechanical components.  Ability to the any minimum method projective plan and apply in to mechanical components.  Ability to the any minimum method projective plan and apply in the mechanical components.  Ability to the any method and projective proper generation in India" ordinate various costs and performance incorporated with different types of power generation system.*  The student will understand the difference between component level design and system level design and systems, the for the specifications stated formulated.  Ab
CO4 CO5 CO of the c CO1 CO2 CO4 CO5 CO6 CO6 CO6 CO6 CO7	Time and Frequency domain analysis of system model (for control applications)  Development of FLC ladder programming and implementation of real life votems.  Development of FLC ladder programming and implementation of real life votems.  Course "Numerical Methods and Optimization"  Evaluate for note of equations and simultaneous equations in engineering applications using iterative approach with minimized error.  Apply Largengia's, Newton's forward interpolation method for solving engineering problems, and fir all fifteen stores by least square technique.  Bestell statisticans of numerical interpolation method for solving engineering problems, and fir all fifteen stores by least square technique.  Bestell's statisticans of numerical interpolation method for solving engineering problems, and fir all fifteen stores by least square technique.  Bestell's statisticans of numerical interpolation method for solving engineering problems, and first different stores to least engineering problems to solve engineering problems, and first different disquaries (ODE) and partial differential equations (ODE).  Develop programming bois, for solving engineering problems to solve engineering (ODE) and partial differential equations (ODE).  Develop programming bois, for solving engineering problems using numerical methods.  Course "Mechanical System Design"  The student will understand the difference between component level design and system level design.  Ability to design studies machinical systems like pressure resords, median tool giare boost, material handling system, etc. for the specifications stand formulated.  Course "Power Plant Engineerings"  Understand global energy scenario, propent status and future scope of power generation in India "estimate various costs and performances incorporated with different type of power generation system".  Establian and analyze thermal power plant system and congentation and different copponent of plythodectric and nuclear power plant with economic consideration.
CO3 CO5 CO of the c CO1 CO2 CO3 CO4 CO5 CO6 CO6 CO6 CO7	Time and Frequency domain analysis of system model (for contral application)  Plot course implementation on and intersystem  Development of PIC labder programming and implementation of real life systems.  Development of PIC labder programming and implementation of real life systems.  For the course of picture of the programming and implementation of real life systems.  For the course of systems and systems or implementation in engineering papellications using iterative approach with minimized error.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if in different arrows by least square technique.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if sufferent arrows by least square technique.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if sufferent arrows by least square technique.  Apply analysis of solving engineering problems and evaluate interpolation of functions using anised and double interpolation excludinges.  Apply analysis for solving engineering problems using numerical methods.  **Course "Mechanical System Design"**  The student will understand the difference between component level design and system level design.  Ability to take any method apply in the ordinational components.  Ability to the any minimum method projective plan and apply in to mechanical components.  Ability to the any minimum method projective plan and apply in to mechanical components.  Ability to the any minimum method projective plan and apply in to mechanical components.  Ability to the any minimum method projective plan and apply in the mechanical components.  Ability to the any method and projective proper generation in India" ordinate various costs and performance incorporated with different types of power generation system.*  The student will understand the difference between component level design and system level design and systems, the for the specifications stated formulated.  Ab
CO3 CO5 file (CO5) CO of the (CO5) CO1 CO2 CO3 CO4 CO5 CO5 CO5 CO4 CO5	Three and Frequency domain analysis of system model for control applications)  Decloration inflormation on and intersystems  Decloration of PLC ladder programming and implementation of and life systems.  Declorates of PLC ladder programming and implementation of and life systems.  Declorates of PLC ladder programming and implementation of and life systems.  Declorates of PLC ladder programming and implementation of and life systems.  Declorates for notes of equations and simultaneous equations in engineering applications using iterative approach with minimized errors.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if it different curves by least square technique.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if it different curves by least square technique.  Apply Language's, Newton's forward interpolation method for solving engineering problems, and if sufferent curves by least square technique.  Apply subsolve on universal interpolation methods for solving engineering problems, and if sufferent curves by least square techniques.  Apply subsolve on control interpolation in engineering problems and evaluate interpolation of functions using and admitted interpolation.  Apply subsolve decorates of interpolation problems and evaluate interpolation (functions using and admitted interpolations.)  Declorates "Mechanical System Design"  The student will understand the difference between component level design and system level de
CO3 CO5 of the cost of the cos	Time and Frequency demain analysis of system model (for contral applications)  Development of PLC labeler programming and implementation of real life system.  Development of PLC labeler programming and implementation of real life system.  Development of PLC labeler programming and implementation of real life system.  Evaluate the roots of equations and simultaneous equations in regimenting applications using iterative approach with minimized error.  Apply Lapsage's, Newton's forward interpolation method to solve constrained and unconstrained problems.  Apply Lapsage's, Newton's forward interpolation method for solving engineering problems, and if different surves by Jeans square inchniques.  Apply Lapsage's, Newton's forward interpolation method for solving engineering problems, and if different surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation method for solving engineering problems, and if sufficient surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation method for solving engineering problems, and if sufficient surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation method for solving engineering problems, and if sufficient surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation reduces on surfaces and surfaces in the surpairs in the su
CO3 CO5 of the cost of the cos	Time and Frequency domain analysis of system model (for control applications)  Declorment of FLC ladder programming and implementation of real life system.  Declorment of FLC ladder programming and implementation of real life system.  Course "Numerical Methods and Optimization"  Evaluate the rows of equations and simultaneous equations using intensive approach with minimized error.  Apply acquited, and simultaneous equations in engineering applications using intensive approach with minimized error.  Apply acquited, and simultaneous equations method for solving engineering problems, and fit different curves by least square techniques.  Apply Lagrange"s, Newton's forward interpolation method for solving engineering problems, and fit different curves by least square techniques.  Apply Lagrange"s, Newton's forward interpolation method for solving engineering problems, and fit different curves by least square techniques.  Apply Lagrange"s, Newton's forward interpolation method for solving engineering problems, and fit different curves by least square techniques.  Apply actual conscious of interpolation method for solving engineering problems, and fit different solving to apply in the mention of minerical interpolation problems.  Declorar engantement by the for solving engineering problems and engineering problems using annerical methods.  Course "Mechanical System Declogs"  Ability to design various mechanical systems like pressum tessels, mediant tool girar bross, meterial handling systems, etc. for the specification stated formulated.  Ability to lone uptimum design principles and apply it to mechanical components.  Ability to lone uptimum design principles and apply it to mechanical components.  Course "Power Plant Engineering."  Education and survey tesses and of future scope of power generation in India "entimate various costs and performances incorporated with different types of power generation system".  Especial analyses themad energy stemsive power polant with the typical configuration sta. Decel and gas tu
CO4 CO5 CO6 CO6 CO1 CO1 CO1 CO2 CO3 CO5 CO6 CO 6 CO 6 CO 7	Time and Frequency demain analysis of system model (for contral applications)  Development of PLC labeler programming and implementation of real life system.  Development of PLC labeler programming and implementation of real life system.  Development of PLC labeler programming and implementation of real life system.  Evaluate the roots of equations and simultaneous equations in regimenting applications using iterative approach with minimized error.  Apply Lapsage's, Newton's forward interpolation method to solve constrained and unconstrained problems.  Apply Lapsage's, Newton's forward interpolation method for solving engineering problems, and if different surves by Jeans square inchniques.  Apply Lapsage's, Newton's forward interpolation method for solving engineering problems, and if different surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation method for solving engineering problems, and if sufficient surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation method for solving engineering problems, and if sufficient surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation method for solving engineering problems, and if sufficient surves by Jeans square inchniques.  Apply surpairs, Newton's forward interpolation reduces on surfaces and surfaces in the surpairs in the su
CO4 CO3 CO4 CO5	The soft Progenity density analysis of system model fire contral applications [PD contral implementation on real time systems.  Declaration of PLC labelar programming and implementation of real life system.  Declaration of PLC labelar programming and implementation of real life system.  Evaluate the roots of equations and simultaneous equations in engineering applications using treative approach with trainitized error.  Apply Lapragie's, Newton's feweral interpolation method to solve constrained and autocutatining problems.  Apply Lapragie's, Newton's feweral interpolation method for solving engineering problems, and if in different curves by least square technique.  Belletin's stanffactors of mericulal startistics in engineering problems, and if it sufficient surprises to place to mericulal startistics in engineering problems, and if it sufficient curves by least square technique.  Apply surprises, believed to fewer the engineering problems and advanced interpolations.  Apply surprises, believed to fewer the engineering problems and evaluate interpolation of functions using an electric specification of functions using interpolations.  Apply surprises and the difference between component level design and system level design.  The student will understand the difference between component level design and system level design.  Ability to design various methods of systems and particle starting and systems level design.  Ability to design various indicated systems like resource vessels. Realize tool gar books, material bandling systems, etc. for the specifications stated formulated.  Ability to leave a preliminar design protection and apply to in excellated openions.  Ability to leave a preliminar design protection and opply to in excellated opply to in excellated opply to interpolation and different exception in labelar systems, etc. for the specifications stated formulated.  Ability to leave a present level of protection from concern to protect states and forms supply to incredible of opposess.  Ability to handle
CO4 CO5 CO6 CO of the CO5 CO6 CO of the CO5 CO6 CO6 CO6 CO7	Three and Frageness demain analysis of system model (for control application)  Ploc count implementation on and intersystems  Development of PLC holder programming and implementation of and life systems.  **Corner **Numerical Methods and Optimization**  **Evaluate for note of equations and simultaneous equations in engineering applications and an advance in engineering applications in engineering applications and evaluate integrations of functions using animal and durable integrations techniques.  **Apply tandaction design agriculture in agriculture applications and applications applications in a supplication applications applications are applications and applications applications applications are applications attend formulated.  **Ability to take applications are reported as a possibility of the application in the difference between component level design and system level design and system level design and system level design and system level design.  **Ability to take applications are reported as a possibility of the applications are reported as a possibility and applications are reported as a possibility and applications are applications as and affirm and applications are applications as a possibility and applications are applications as a possibility and app
CO4 CO5 CO6 CO6 CO7	The seaf Progenicy demain analysis of system model (for contral application)  Procount implementation on real time system  Development of PEC labider programming and implementation of real life system.  Development of PEC labider programming and implementation of real life system.  Evaluate the roots of equations and simultaneous equations in engineering applications using territive approach with trainitized error.  Apply Lampage's, Nector's inferent alteraptation method to solve constrained and succentratingd problems.  Apply Lampage's, Nector's inferent interpolation method for solving engineering problems, and if sufficient curves by least square technique.  Better its sufficience on interpolation interpolation method for solving engineering problems, and if sufficient curves by least square technique.  Better its sufficience on interpolation interpolation method for solving engineering problems, and if sufficient curves by least square technique.  Apply methods encountered in engineering problems and evaluate integration in fluctions using integration techniques.  Apply methods encountered in engineering proficients and evaluate integration of fluctions using integration and duplies integration techniques.  Apply methods encountered in engineering proficients and evaluate integration of fluctions using integration and evaluate integration in the evaluation of the evaluati
CO3 CO5 CO5 CO6 CO of the CO of the CO3 CO5	The safe frequency density analysis of system model (for control application)  Procured implementation on sail interpretation of sail life systems.  Declarate from the PC labeler programming and implementation of sail life systems.  Corner "Numerical Methods and Optimization"  Feduction for note of quantion and simultaneous equations in engineeting applications in engineeting problems, and if in different corners by least square technique.  Apply Lapages", Newton's forward interpolation method for solving engineering problems, and if in different corners by least square technique.  Apply analysis of consistent and interpolation method for solving engineering problems, and if sufferent corners by least square technique.  Apply analysis of consistent and interpolation method for solving engineering problems, and if sufferent corners by least square technique.  Apply analysis of evolving engineering problems wing numerical apparation of functions using integration techniques.  Apply analysis of solving engineering problems using numerical methods.  Corner "Mechanical System Design"  The studens will understand the difference between component level design and system level design.  Ability to be understand the difference between component level design and system level design.  Ability to bandle system level projects from concept to product.  Corner "Power Plant Engineering"  Understand projects and projects systems and distress concept to produces.  Corner "Power Plant Engineering"  Understand proven plant systems and distress concept to produces and numerical systems, etc. for the specifications stated formulated.  Ability to a design arising methods upon a plant and fiftered components of produces and an activate systems, proposed states and cogneration systems.  Explain and analysis requires a proposed states and cogner
CO4 CO5 CO6 CO6 CO7	The seaf Progenicy demain analysis of system model (for contral application)  Procount implementation on real time system  Development of PEC labider programming and implementation of real life system.  Development of PEC labider programming and implementation of real life system.  Evaluate the roots of equations and simultaneous equations in engineering applications using territive approach with trainitized error.  Apply Lampage's, Nector's inferent alteraptation method to solve constrained and succentratingd problems.  Apply Lampage's, Nector's inferent interpolation method for solving engineering problems, and if sufficient curves by least square technique.  Better its sufficience on interpolation interpolation method for solving engineering problems, and if sufficient curves by least square technique.  Better its sufficience on interpolation interpolation method for solving engineering problems, and if sufficient curves by least square technique.  Apply methods encountered in engineering problems and evaluate integration in fluctions using integration techniques.  Apply methods encountered in engineering proficients and evaluate integration of fluctions using integration and duplies integration techniques.  Apply methods encountered in engineering proficients and evaluate integration of fluctions using integration and evaluate integration in the evaluation of the evaluati
CO4 of the CO5 of the	The safe frequency density analysis of system model (for control application)  Procured implementation on sail interpretation of sail life systems.  Declarate from the PC labeler programming and implementation of sail life systems.  Corner "Numerical Methods and Optimization"  Feduction for note of quantion and simultaneous equations in engineeting applications in engineeting problems, and if in different corners by least square technique.  Apply Lapages", Newton's forward interpolation method for solving engineering problems, and if in different corners by least square technique.  Apply analysis of consistent and interpolation method for solving engineering problems, and if sufferent corners by least square technique.  Apply analysis of consistent and interpolation method for solving engineering problems, and if sufferent corners by least square technique.  Apply analysis of evolving engineering problems wing numerical apparation of functions using integration techniques.  Apply analysis of solving engineering problems using numerical methods.  Corner "Mechanical System Design"  The studens will understand the difference between component level design and system level design.  Ability to be understand the difference between component level design and system level design.  Ability to bandle system level projects from concept to product.  Corner "Power Plant Engineering"  Understand projects and projects systems and distress concept to produces.  Corner "Power Plant Engineering"  Understand proven plant systems and distress concept to produces and numerical systems, etc. for the specifications stated formulated.  Ability to a design arising methods upon a plant and fiftered components of produces and an activate systems, proposed states and cogneration systems.  Explain and analysis requires a proposed states and cogner
CO3 CO5	The sand Frequency domain analysis of system model (fire control applications) Plocument (PDC labbler programming and implementation of real life systems.  **Corner*** Numerical Methods and Quintinatains**  **Control*** Numerical Methods and quintinatains methods to solve constrained and unconstrained errors.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems, and if it affected curves by least square technique.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems, and if it affected curves by least square technique.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems, and if it affected curves by least square technique.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems and evaluate integration influences unique and double integration techniques.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems using menetical networks.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems using menetical networks.  **Apply Lapages**, Newton's forward interpolation registering problems using menetical networks.  **Apply Lapages**, Newton's forward interpolation registering problems using menetical networks.  **Ability to learn the difference between component level design and system level design.  **Ability to learn the difference between component level design and system level design.  **Ability to learn the difference property security property security, present status and filters expected, mechanism in India* "antimate various costs and performances incorporated with different types of power generation systems.  **Ability to handless status level property generation in India* "antimate va
CO1 CO3	The seaf Progenicy density analysis of system model (for contral agricultum)  Procured inflormation on real times yetem  Declaraction of P.C. labelor programming and implementation of real life system.  Course "Numerical Methods and Optimization"  Evaluate the rots of equations and simultaneous equations in engineering applications using territive approach with ministral error.  Apply Lagragis, 'Neston's forward interpolation method for solving engineering problems, and if sufficient survey by least square technique.  Apply Lagragis, 'Neston's forward interpolation method for solving engineering problems, and if sufficient survey by least square technique.  Apply analysis, 'Neston's forward interpolation method for solving engineering problems, and if sufficient survey by least square technique.  Apply analysis, 'Neston's forward interpolation method for solving engineering problems, and if sufficient survey by least square technique.  Apply analysis, 'Neston's forward interpolation methods for solving engineering problems, and if sufficient survey by least square technique.  Apply surdents of montreal interpolation in engineering problems and collastic interpolation.  Apply survey of the solving survey of the solving engineering problems and advanced interpolation.  Apply survey "Analysis of the solving engineering profession survey and engineering produces on a survey and engineering produces on a survey and engineering produces on a survey and analysis of the solving engineering produces and advanced as a survey of the specifications stated formulated.  Ability to design survey methods of survey and engineering and system level design and system level design and system level design and system level design and system level design.  Ability to be indicated and the system and concerned to produce in a machine prove plant with connectic consideration.  Electric "Power Plant Engineering"  Belant and analysis of security and produced provide provide and nuclear power plant in accompanion prove plant and finement c
CO3 CO5	The sand Frequency domain analysis of system model (fire control applications) Plocument of PLC holder programming and implementation of real life systems.  **Corner*** Numerical Methods and Quintinatation**  **Control*** Numerical Methods and Quintinatation method to solve constrained and unconstrained errors.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems, and if it affected curves by least square technique.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems, and if it affected curves by least square technique.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems, and if it affected curves by least square technique.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems and evaluate interpolation (functions using anisola and double interpolation.  **Apply Lapages**, Newton's forward interpolation method for solving engineering problems using menetical proteins.  **Apply Lapages**, Newton's forward interpolation methods of engineering problems using memetical proteins.  **Apply Lapages**, Newton's forward interpolation related to design and system level design.  **Apply Lapages**, Newton's forward interpolation related to design and system level design.  **Ability to least of the difference between component level design and system level design.  **Ability to least of the difference proteins and faller greaters are proteins.  **Ability to least of the difference proteins and faller greaters are proteins.  **Discourages**  **Power Plant Engineering**  **Discourages**  **Discourages
CO1 of the CO of	The seaf Progenic demain analysis of system model (free contra application) Proclomating Implementation on roal time systems Development of P.C. labelar programming and implementation of real life systems.  Development of P.C. labelar programming and implementation of real life systems.  Exerc. "Numerical Methods and Optimization."  Foodular for notes of equations and simultaneous equations in engineering applications using treative approach with retinizated error.  Apply Largangs, Newton's feweral interpolation method for solving engineering problems, and first direct curves by least square technique.  Apply Largangs, Newton's feweral interpolation method for solving engineering problems, and first direct curves by least square technique.  Apply and the control of engineering problems and interpolation method for solving engineering problems, and first direct curves by least square technique.  Apply and the control of engineering problems and associated and succentration of fractions using and double interprise techniques.  Apply and the control of engineering problems and problems interprise techniques.  Apply and the control of engineering problems and advanced in problems are application to the control of engineering problems and advanced and problems interprise to the other control of engineering problems and advanced and problems interprise to an explaint differential equations (PDE).  To explain a will understand the difference between composed level design and system level design.  The state and will understand the difference between composed level design and system level design.  Ability to be an explaint modeling principles and apply it to mechanical components.  Ability to be an equinam design principles and apply it to mechanical components.  Ability to be an equinam design principles and apply it to mechanical components.  Ability to be an equinam design principles and apply it to mechanical components.  Explaint and analysis thermal energy plast system level design and system level design.  Explai
CO4 (CO5) (C	Time and Fragency demain analysis of system model (for contral agricultion)  Procouncing Information on real times yetem  Development of P.C. labelar programming and implementation of real life system.  Course "Numerical Methods and Optimization"  Evaluate the rots of equations and simultaneous equations in engineering applications using terrains approach with minimized error.  Apply Lagragis, Neston's forward interpolation method for solving engineering problems, and fit afficient curves by least square technique.  Apply Lagragis, Neston's forward interpolation method for solving engineering problems, and fit afficient curves by least square technique.  Apply and control of equations and interpolation method for solving engineering problems, and fit sufficient curves by least square technique.  Apply and the control of the problems of the control of finations using an all and solving interpolations.  Apply and the control of the problems of the control of the contro

	nt of Civil Engineering
Semester -	
CO of the	Course "Building Technology and Materials"
COULTE	Control Summing Communication
COI	Students will be able to identify the type of building as per NBC and choose appropriate foundation, DPC, Masonry and scaffolding from the available resources.
	Students will be able to choose and demonstrate the use of new construction techniques as per requirement.
CO3	Students will be able to differentiate all the types of flooring and roofing materials and techniques.
CO5	Studens will be able to chrone emission lepton demand of the contraction of the contracti
CO6	Students will be able to identify suitable modern & eco-friendly materials for particular application
CO of the	Course "Surveying"
COI	Operate and use surveying equipment.
	Operator has to me to the existing potential period of the existing period of the existing potential period of the existing period of the existing period of the existing period of the existing perio
CO3	Classify the ground features from the map or plan.
CO4	Analyze temporary adjustments and check permanent adjustments of the Theodolite.
CO of the	Course "Engineering Mathematics III"
COI	Solve higher order linear differential equation using appropriate techniques for analyzing electrical circuits.
CO2	Solve problems related to Numeriacal Methods processing to solve linear equations
CO3	Apply statistical methods like correlation, regression analysis and probability theory for analysis and prediction of a given data.
CO4 CO5	Perform vector differentiation and integration to analyze the vector fields.
CO6	Apply knowledge of vector integral calculus to fluid mechanics and various engineering applications.  Solve various partial differential equations like one dimensional diffusion and wave equations, one and two dimensional heat equations.
	Milesel and Committee and Comm
CO of the	Course "Strength of Materials"
CO1	Able to describe the concepts, constituents laws of solid mechanics and Engineering properties of materials.
CO2 CO3	Evaluate stresses & strains in a member under axial loading, lateral loading and torsional moments.  Able to explain concept of strain energy & evaluate stresses and strain developed due to gradual, sudden and impact load.
CO4	Zwie is explaint (outcept in stature intergy a certainne statesses and again theories) failure under an impact tood.  Analysis of stees & stature intergy a point in a metasses and again theories of failure under non-
CO5	Able to Explain concept of internal forces under lateral load and able to draw SFD & BMD.
CO6	Apply Euler's and Rankine's theory of buckling load to long column and analyze the member subjected to eccentric loading.
co.co	Course "Gestechnical Engineering"
CO of the	Loure "teotecnnical Engineering"
COI	Differentiate the different types of soil and their engineering properties and classify them.
CO2	Determine the soil properties in laboratory and develop a proficiency in handling experimental data.
CO3	Understand of the concept of effective stress and its influence on soil behavior.
CO4 CO5	Develop an understanding of the influence of water flow on the engineering behaviour of soils.
	Analyze engineering properties like compaction, permeability and soil shear strength.  Classify soil slopes and identify their modes of failure.
	Case of 20th analysis and administ used industrial or institute.
CO of the	Course "Hydrology and water resource engineering"
CO1	Able to describe the hydrologic cycle and analyze the precipitation data.  Able to septim the stream gauging.
CO3	Anne to explain the stream junging. About to explain the stream junging. About to explain the stream junging.
CO4	Able to describe the ground water hydrology.
CO5	Able to describe the ground water indrology: Able to analyze the flood frequency and runoff bydrograph.
CO5 CO6	Able to make the front frequency and runoff hydrograph.  Able to make the front frequency and runoff hydrograph.  Able to characterize the various terms related to reservoir planning.
CO5	Able to describe the ground water indrology: Able to analyze the flood frequency and runoff bydrograph.
CO5 CO6 CO7	Able to make the front frequency and runoff hydrograph.  Able to make the front frequency and runoff hydrograph.  Able to characterize the various terms related to reservoir planning.
CO5 CO6 CO7	Able to eaching the ground water byterloger.  Able to manyther the off requency and roundfl bytergraph.  Able to manuterier the various terms related to receive planning.  Able to explain the lift irrigation schemes and process of water logging.  Course "Infrastructure Engineering and Construction Techniques"
CO5 CO6 CO7 CO of the	Able to enders the ground water hydrology.  Able to enders for frequency and round Flydrograph.  Able to chanceteris the various terms related to receive in planting.  Able to chanceteris the various terms related to receive in planting.  Able to explain the firm graption schemes and opcoses of water logging.  Course "Infrastructure Engineering and Construction Techniques".  Identify role of infrastructure engineering in national and alphal development.
CO5 CO6 CO7 CO of the	Able to enders the ground water beforlow.  Able to many the fiber frequency and roundfl hydrograph.  Able to many the fiber frequency and roundfl hydrograph.  Able to explain the lift irrigation schemes und process of water logging.  Course "Infrastructure Engineering and Construction Techniques"  [dentify role of Infrastructure engineering in national and global development.  Explain the differencements of Kalways.
CO5 CO6 CO7 CO of the CO1 CO2 CO3	Able to analyse for frequency and reductions.  Able to characterize the ground water behedour.  Able to characterize the twistons terms related to reservoir planting.  Able to characterize the twistons terms related to reservoir planting.  Able to explain the firm grainer schemes and openess of water logging.  Correc "Infrastructure Engineering and Construction Techniques"  Electric related of infrastructure engineering in national and plobal development.  Explain the different elements of Englaways.
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5	Able to analyse for frequency and reduction.  Able to characterize the ground water behedour.  Able to characterize the twistons terms related to reservoir planting.  Able to characterize the twistons terms related to reservoir planting.  Able to explain the firm grainer achievas and openess of water legging.  Correc "Infrastructure Engineering and Construction Techniques"  Edentity role of infrastructure engineering in national and plobal development.  Explain the different elements of Englaway.  Explain the different elements of Englaway.  Englands different report of construction techniques.  Elements of the construction of the constru
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5	Able to eaching the front Muster Indicator.  Able to characterize the various terms related to reservoir planning.  Able to catalynethe for frequency and report planning.  Able to explain the lift irrigation schemes und process of water logging.  Course "Infrastructure Engineering and Countraction Techniques"  [Bentify role of Infrastructure Engineering and Able to explain and global development.  [Explain the different types of construction Techniques.]  [Excitate different types of construction techniques.]  [Excitate different types of construction techniques.]
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6	Able to analyse from frequency and reductions.  Able to characteris the surious terms related to receive inheritor.  Able to characteris the various terms related to receive inheritor.  Able to explain the firm gratious relatence and openess of water legging.  Correc "Infrastructure Engineering and Construction Techniques"  Electric relations of infrastructure engineering in national and about development.  Explain the different elements of Englavays.  Electric different relations of construction techniques.  Electric different types of transferents unchanges.  Electric different types of introduction enclasses.  Electric different types of introduction enclasses.  Electric different types of introduction enclasses.  Electric different types of transferents unchanges.  Electric different types of transferent enclasses.  Electric different types of Earth moving equipments.
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6	Able to analyse for frequency and reduction.  Able to characterize the ground water behedour.  Able to characterize the twistons terms related to reservoir planting.  Able to characterize the twistons terms related to reservoir planting.  Able to explain the firm grainer achievas and openess of water legging.  Correc "Infrastructure Engineering and Construction Techniques"  Edentity role of infrastructure engineering in national and plobal development.  Explain the different elements of Englaway.  Explain the different elements of Englaway.  Englands different report of construction techniques.  Elements of the construction of the constru
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6	Able to enabyte for frequency and related photology.  Able to characterize the surious terms related to reservoir planting.  Able to characterize the various terms related to reservoir planting.  Able to explain the firm grainer adverses and openess of water legging.  Corres "Infrastructure Engineering and Construction Techniques"  Elegative role of infrastructure engineering and construction Techniques"  Elegative role of infrastructure engineering and and planting and development.  Explain the different elements of Englaway.  Bustone different elements of Englaway.  Bustone different report of construction techniques.  Bustone different open of construction techniques.  Bustone different open of decks and layer.  Describe different report of the englaver.  Corres "Structural Design."
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO6 CO6 CO6 CO of the	Able to analyse from frequency and reductions.  Able to characteris the surious terms related to receive inheritor.  Able to characteris the various terms related to receive inheritor.  Able to explain the firm gratious relatence and openess of water legging.  Correc "Infrastructure Engineering and Construction Techniques"  Electric relations of infrastructure engineering in national and about development.  Explain the different elements of Englavays.  Electric different relations of construction techniques.  Electric different types of transferents unchanges.  Electric different types of introduction enclasses.  Electric different types of introduction enclasses.  Electric different types of introduction enclasses.  Electric different types of transferents unchanges.  Electric different types of transferent enclasses.  Electric different types of Earth moving equipments.
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3	Able to earlyse the front States the thereby.  Able to canalyse the for frequency and related to reserve in planting.  Able to canalyse the for frequency and reports of variety leging.  Course "Infrastructure Engineering and Construction Techniques"  Liferative the different depose of construction Institution and ploth development.  Esplain the different depose of construction techniques.  Esplain the different depose of construction techniques.  Esplain the different type of fundoling periods.  Esplain the different oppes of construction techniques.  Esplain the different oppes of construction techniques.  Esplain the different oppes of fundoling periods.  Esplain the importance of docks and harbors.  Course "Structural Design."  Able to explain various philosophy, classify structural steel section, analyze and design of tension member.  Able to explain various philosophy, classify structural steel section, analyze and design of tension member.  Able to makey and design compression members along with design of pression free though.
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO of the CO of the CO1 CO1 CO2 CO3 CO4 CO3 CO4 CO4 CO5 CO4 CO5 CO4 CO4 CO5	Able to enabyte for frequency and related prolonger.  Able to characterize the surious terms related to reservoir planning.  Able to characterize the surious terms related to reservoir planning.  Able to explain the firm grainer adverses and process of water legging.  Correc "Infrastructure Engineering and Construction Techniques"  Esculiar related to infrastructure engineering and Construction Techniques"  Escular related reference to infrastructure engineering in national and plobal development.  Explain the different elements of Englaways.  Bustrue different vectors of construction techniques.  Bustrue different vector of construction techniques.  Bustrue different vector of docks and particular perhods.  Doctrice different vector of docks and particular perhods.  Doctrice different vectors of docks and particular perhods.  Correc "Structural Design-T"  Able to englava vectors and control of the place.  Able to many the color of the control of the place.
CO5 CO6 CO7 CO of the CO2 CO3 CO4 CO5 CO6 CO of the CO of the CO of the CO of the CO2 CO3 CO4 CO3 CO4 CO5 CO6 CO of the CO5	Able to earlyse the front Suster bytelongs.  Able to characteris the warious term related to reserving planting.  Able to characteris the various term related to reserving planting.  Able to characteris the various term related to reserving planting.  Course: "Infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure engineering and Construction Technique"  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique"  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Constructio
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO of the CO of the CO1 CO1 CO2 CO3 CO4 CO3 CO4 CO4 CO5 CO4 CO5 CO4 CO4 CO5	Able to enabyte for frequency and related prolonger.  Able to characterize the surious terms related to reservoir planning.  Able to characterize the surious terms related to reservoir planning.  Able to explain the firm grainer adverses and process of water legging.  Correc "Infrastructure Engineering and Construction Techniques"  Esculiar related to infrastructure engineering and Construction Techniques"  Escular related reference to infrastructure engineering in national and plobal development.  Explain the different elements of Englaways.  Bustrue different vectors of construction techniques.  Bustrue different vector of construction techniques.  Bustrue different vector of docks and particular perhods.  Doctrice different vector of docks and particular perhods.  Doctrice different vectors of docks and particular perhods.  Correc "Structural Design-T"  Able to englava vectors and control of the place.  Able to many the color of the control of the place.
CO5 CO6 CO7 CO of the: CO1 CO2 CO3 CO4 CO5 CO6 CO of the: CO1 CO2 CO3 CO4 CO5 CO6 CO of the: CO1 CO2 CO3 CO4 CO5 CO0	Able to earlyse the front Suster bytelongs.  Able to characteris the warious term related to reserving planting.  Able to characteris the various term related to reserving planting.  Able to characteris the various term related to reserving planting.  Course: "Infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure engineering and Construction Technique"  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique"  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique "  Sentity role of infrastructure engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Construction Technique "  Sentity role of infrastructure Engineering and Construction Technique"  Sentity role of infrastructure Engineering and Constructio
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO7 CO6 CO7	Able to earlyste the round water byteloties. Able to earlyste the fire transport byteloty and the company of the company of the company of the transport of the company of
CO5 CO6 CO7 CO of the CO1 CO2 CO3 CO6 CO of the CO1 CO2 CO5 CO6 CO of the CO5 COC COC COC COC COC COC COC COC COC	Able to eachies the ground water beholose.  Able to candarie the fort frequency and restore planting.  Able to candarie the fort superior and construction Technique.  Able to explain the fill transplant scheme and operated over the planting.  Correc "Infrastructure Engineering and Construction Technique."  Benth role of infrastructure Engineering and Construction Technique."  Emplain the different engineering in national and about development.  Explain the different engent of construction techniques.  Blustrate different types of function in schemiques.  Blustrate different types of construction techniques.  Blustrate different types of function growthods.  Doctribe different types of function growthods.  Doctribe different types of Earth moving equipments.  Correc "Structural Design-I"  Able to resplain value and design compensation members along with design of bose.  Able to make and design compensation members along with design of bose.  Able to make and design compensation members along with design of bose.  Able to make the bosis and design compensation members and to design the beams for pive loading.  Able to engine make the basis of our figuration, classification and fundamental concepts of structural analysis.  Able to explain the basis of our figuration, classification and fundamental concepts of structural analysis.
CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO5 CO6 CO of the CO5 CO6 CO0 of the CO7	Able to earlyste the ground water byteloties. Able to earlyste the fire transport byteloty and the service of transport planting. Able to earlyste the fire transport planting. Able to earlyste the fire transport planting. Able to explain the fire transport planting. Able to explain the fire transport planting.  Course "Infrastructure Engineering and Construction Techniques"  Liberally role of infrastructure Engineering and Construction Techniques"  Liberally role of infrastructure Engineering and Construction Techniques  Englain the different elements of Englavey.  Englain the different elements of Englavey.  Englain the different elements of Englavey.  Englain the different of docks and based.  Englaving of Constructure Engineering englavey.  Englavey of transport planting methods.  Englain the internetion of docks and based.  Describe different yees of transport planting.  Englavey of transport planting methods.  Englain the internetion of docks and based.  Describe different yees of transport planting.  Englavey of Englavey of Englavey.  Englavey of Englavey
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CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO5 CO6 CO of the CO5 CO6 CO0 of the CO7	Able to earlywer for frequency and reduction.  Able to calmaterize the various terms related to reservoir planning.  Able to calmaterize the various terms related to reservoir planning.  Able to explain the firm grainer schemes and operated on operation of the planning
COS	Able to earlyste the ground water byteloties. Able to earlyste the fire treatment and the processor of particular of the processor of the proc
COS	Able to earlyw for frequency and related photology.  Able to canadyse for frequency and related to reservoir planting.  Able to canadyse for frequency and construction Technique.  Correc "Infrastructure Engineering and Construction Technique."  Escult red of infrastructure Engineering and Construction Technique.  Esquisit of infrastructure Engineering and Construction Engineering.  Esquisit of infrastructure Engineering and Engineering Engineering.  Esquisit of infrastructure Engineering and Engineering Engineering.  Esquisit of infrastructure Engineering Enginee
COS	Able to earlywer for frequency and reduction.  Able to calmaterize the various terms related to reservoir planning.  Able to calmaterize the various terms related to reservoir planning.  Able to explain the firm grainer schemes and operated on operation of the planning
CO5 CO6 CO6 CO7 CO6 CO7 CO6 CO7 CO6 CO7	Able to enalyze for frequency and related photology.  Able to characterize the twistons terms related to reservoir planning.  Able to characterize the visions terms related to reservoir planning.  Able to characterize the visions terms related to reservoir planning.  Correc "Infrastructure Engineering and Construction Techniques"  Esculiv role of infrastructure Engineering and Construction Techniques"  Esculiv role of infrastructure Engineering and Construction Techniques"  Esculate different sector of construction techniques.  Esculate different sector of construction description of construction
COS	Able to earlyw for frequency and related photograph.  Able to characterize the surious terms related to reservoir planning.  Able to characterize the surious terms related to reservoir planning.  Able to characterize the surious terms related to reservoir planning.  Correc "Infrastructure Engineering and Construction Techniques"  Escult related infrastructure Engineering and Construction Techniques"  Escult related infrastructure engineering in national and plobal development.  Explain the different elements of Englavays.  Escultar different elements of Englavays.  Escultar different elements of Englavays.  Escultar different report of unording methods.  Escultar different report of unording reports.  Correc "Structural Davigues"  Able to englava and design compression members along with design of Pase.  Able to make and design compression members along with design of Pase.  Able to make the form of the consection and planning size of the planting unique districture of the planting unique districture of the plant.  Able to englava makes and other effects on quatery aider and design of the plant.  Able to englava makes the loads and their effects to consection and planting using 15. 800.2007  Correc "Structural Analysis II"  Able to explain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to englava the foods and their effects on gatter grader and design of the plant.  Able to englava the foods and their effects on gatter grader and design of the plant.  Able to englava the foods and their effects on gatter grader and design of the planting using 15. 800.2007  Correct "Structural Analysis II"  Able to englava the foods and their effects on gatter grader and englave the planting using 15. 800.2007  Correct "Structural Analysis II"  Able to englava the foods and definited construction of the gatter, structure using extracti
COS (COS of the COS of	Able to earlyste the funds water hydrology. Able to earlyste the firequency and related to receive it planting. Able to earlyste the firequency and construction Techniques. Able to earlyste the firequency and construction Techniques.  Course "Infrastructure Engineering and Construction Techniques."  Liberative Techniques and Construction Techniques.  Liberative Techniques and Con
CO5 CO6 CO7 CO6 CO7	Able to enalyze for frequency and related prolocology.  Able to canalyze for frequency and related to reservoir planning.  Able to enalyze for frequency and construction Techniques.  Able to explain the firm frequence description of construction Techniques.  Correc "Infrastructure Engineering and Construction Techniques."  Esculate of infrastructure Engineering and Construction Techniques.  Explain the different demens of Railways.  Explain the different demens of Railways.  Bustone different veryes of construction techniques.  Bustone different veryes of transfering methods.  Explain the importance of docks and abpense.  Describe different prop of Earth moving equipments.  Correc "Structural Designe"  Able to explain various philosophy, classify structural steel section, analogo and design of tension member.  Able to explain various philosophy, classify structural steel section, analogo and design of tension member.  Able to explain various philosophy, classify structural steel section, analogo and design of these.  Able to make the constructural steel beams and to design of these.  Able to make the constructural steel beams and to design of the accounters and place grader and design of the place.  Able to englain the frequential steel beams and to design of the place.  Able to englain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to explain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to evaluate the basics of four annual perform plante analysis of indeterminate beams and speciation for determinate beams and speciation to over the total analysis of the determinate beams and speciation or determinate beams and speciation to over the special proposed from the planters.  Able to enalyze the basics of flow annual and perform plante analysis of indeterminate beams and speciation to develope of unstandy flow in Flaid Mechanics.  Able to enalyze the basics of flow on and submerged bodies, and sindamental concep
COS	Able to earlywise for frequency water hydrology.  Able to exchange the frequency water hydrology.  Able to exchange the first protein depends to rescover planning.  Able to exchange the first protein of the species of water beging.  Course "Infrastructure Engineering and Construction Techniques"  Liberative Techniques of Construction Techniques"  Liberative Techniques of Infrastructure Engineering and Construction Techniques"  Liberative Techniques of Infrastructure Engineering and Construction Techniques "  Liberative Techniques of Infrastructure Engineering and Construction Techniques"  Liberative Techniques of Infrastructure Engineering and Construction Techniques "  Liberative Techniques of Infrastructure Engineering and Construction Techniques"  Liberative Techniques of Infrastructure Engineering and Construction Techniques "  Liberative Techniques of Infrastructure Engineering in national and plobal development.  Explain the different even Construction Institution Under Engineering Techniques (Infrastructure Engineering Institution Under Engineering Institution Under Engineering
COS (COS of the COS of	Able to enalyze for frequency and related prolocology.  Able to canalyze for frequency and related to reservoir planning.  Able to enalyze for frequency and construction Techniques.  Able to explain the firm frequence description of construction Techniques.  Correc "Infrastructure Engineering and Construction Techniques."  Esculate of infrastructure Engineering and Construction Techniques.  Explain the different demens of Railways.  Explain the different demens of Railways.  Bustone different veryes of construction techniques.  Bustone different veryes of transfering methods.  Explain the importance of docks and abpense.  Describe different prop of Earth moving equipments.  Correc "Structural Designe"  Able to explain various philosophy, classify structural steel section, analogo and design of tension member.  Able to explain various philosophy, classify structural steel section, analogo and design of tension member.  Able to explain various philosophy, classify structural steel section, analogo and design of these.  Able to make the constructural steel beams and to design of these.  Able to make the constructural steel beams and to design of the accounters and place grader and design of the place.  Able to englain the frequential steel beams and to design of the place.  Able to englain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to explain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to evaluate the basics of four annual perform plante analysis of indeterminate beams and speciation for determinate beams and speciation to over the total analysis of the determinate beams and speciation or determinate beams and speciation to over the special proposed from the planters.  Able to enalyze the basics of flow annual and perform plante analysis of indeterminate beams and speciation to develope of unstandy flow in Flaid Mechanics.  Able to enalyze the basics of flow on and submerged bodies, and sindamental concep
COS (COS )  COS of the COS (COS )	Able to enabyte the ground water beholose.  Able to exchange the frequency and rehotology.  Able to exchange the frequency and control phylograph.  Able to change the frequency and control phylograph.  Able to exchange the fringation scheme and operated over logging.  Correc "Infrastructure Engineering and Construction Techniques"  Benth role of infrastructure Engineering and Construction Techniques.  Explain the different elements of Endways.  Explain the different elements of Endways.  Best of infrastructure Engineering and Construction Techniques.  Best of infrastructure Engineering and Construction Techniques.  Best of infrastructure Engineering and Construction Techniques.  Best of infrastructure engineering in national and abbild development.  Explain the different elements of Endways.  Best of infrastructure engineering in national and abbild development.  Explain the filterent view of Construction Indiana.  Best of infrastructure Engineering methods.  Boschie different types of Careth moving equipments.  Correc "Structural Analysis of the Endways and Endways and design of the Endways and Endways a
COS (COS of the COS of	Able to enalyze the ground water belockope.  Able to exchange the frequency and related periodogue.  Able to exchange the frequency and construction Technique.  Able to exchange the frequency and construction Technique.  Correc "Infrastructure Engineering and Construction Technique."  Esculit related infrastructure Engineering and Construction Technique."  Esculate of infrastructure Engineering and Construction Technique.  Explain the different elements of Englavaye.  England the different elements of Englavaye.  England the importance of construction techniques.  Elements different veryor of transferred mechanics.  Elements different veryor of Englavaye.  Able to analyze de locks and being different veryor of Englavaye.  Able to analyze de locks and elements of englavaye.  Able to analyze veryor design veryor of Englavaye.  Able to englavaye and design compensation on Englavaye.  Able to englavaye and analyze veryor englavaye.  Able to englavaye and analyze veryor englavaye.  Able to englavaye and effects on gattery algebra and design of the pate.  Able to englavaye and effects on gattery algebra and design of the pate.  Able to englavaye the looks and district effects on gattery algebra and design of the pate.  Able to englavaye the looks and district englavaye and englavaye and engl
COS (COS of the COS of	Able to eachies the ground water hydrology. Able to eachies the fire trajectory and related to receive it planting. Able to eachies the fire trajectory and construction Techniques. Able to characterize the various term related to receive it planting.  Correc "Infrastructure Engineering and Construction Techniques"
COS (COS of the COS of	Able to experience the ground water fredericher.  Able to exception the frequency and renderichery experience.  Able to experience the frequency and renderich property experience.  Able to experience the frequency and Construction Techniques.  Corres. "Infrastructure Engineering and Construction Techniques."  Corres. "Infrastructure Engineering and Construction Techniques."  About the office infrastructure engineering and Construction Techniques.  Elegislan the difference renews of Engineery.  Elegislan the difference of International Annual of Abbud development.  Elegislan the difference of International Construction techniques.  Elegislan the difference of Engineery
COS (COS of the COS oS	Able to eachies the ground water hydrology. Able to eachies the fire trajectory and related to receive it planting. Able to eachies the fire trajectory and construction Techniques. Able to characterize the various term related to receive it planting.  Correc "Infrastructure Engineering and Construction Techniques"

	Able to describe and design low cost treatment methods like oxidation pond, aerated lagoons.
CO5	Able to describe onsite wastewater treatments methods, and anaerobic digester.
CO6 CO7	Able to describe industrial wastewater treatment methods.
CO/	Able to draft reports concerned with testing of Wastewater samples and design of various components of wastewater treatment plant including use of software's.
CO of the	Course "Transportation Engineering "
CO or the	Court stangermon engineering
CO1	To discuss historical development, classification and planning of roads in India.
CO2	To understand basic requirements and mechanisms for highway maintenance, drainage, economic, and environment.
CO3	To perform analysis and design of flexible and rigid pavements.
	Understand the various components of airports, planning concepts and air traffic controls.
CO5	Understand the various terms in bridge engineering and its classification.
CO of the	Course "Structural Design and Drawing III"
COI	Able to describe various systems of prestressing and analyze member strength.
CO2	Able to design wastersystem to presure and analyze means.
	Note to do lead calculations and transfer Phenomenon of structures.
CO4	Able to analyze the frame structure for different load Combinations.
	Able to design and detailing of floor beam in a frame.
CO6	Able to design and detailing of different elements of special structures like retaining walls, liquid retaining structures, combined footings and their behavior under load.
CO of the	Course "Architecture and Town Planning"
COI	
	Able to understand the principles, elements and qualities of architecture.  Able to sudve descrives, enricatives of Inducacium and sustainable architecture.
	Take to understanden decisity of name, and an
	Able to study development plan, neighborhood plan & Intelligent transport system.
	Able to understand legislative mechanism for preparation of DP and MRTP.
CO6	Able to understand the concept of special township,GIS,GPS with respect to planning.
CO of the	Course "TOM & MIS in Civil Engineering"
COI	
	Able to explain the various definition of quality and its interpretations, important of quality in construction.  Able to explain concept of Quality Manual and Total Quality Manuagement.
CO3	Anne to explaint Concept or Unitary Maninus and total Quality Maninus (Process.)  Anne to explaint Concept or Unitary Maninus and total Quality Maninus (Process.)  Anne to explaint Concept or Unitary Maninus and total Quality Maninus (Process.)
CO4	Abole to explain damagement intergration Systems (see the state of the
CO5	Able o explain Management information system structure based on management and various types of planning.
CO6	Able to explain Concepts of information, planning and control, information based system.
	at of Civil Engineering
Semester -	11
CO of the	Course" Fluid Mechanics I"
COI	Able to describe properties of Fluids and perform the dimensional analysis
	Name to unexame the protections to 1 mans and unique uniqu
CO3	Able to describe and analyze the kinematic motion of fluids
	Able to explain fluids dynamics and demonstrate the applications of Bernoulli's Equation
	Able to describe laminar flow and boundary layer theory
CO6	Able to characterize the various properties of Turbulent flow & enlist various attributes of fluid flow through Pipes
	Able to apply fundamental principles of fluid mechanics for the solution of practical civil engineering problems of water conveyance in pipes, pipe networks
CO7	
CO7	Able to apply indumental principles of fluid mechanics for the solution of practical civil engineering problems of water conveyance in pipes, pipe networks  Course "Architectural Fluoring and Design of Buildings"
CO of the	Course "Architectural Flanning and Design of Buildings"
CO7	Course "Architectural Planning and Design of Buildings"  Able to relate various amenties and services including safety and land one anoting with respect to town planning
CO of the CO1	Course "Architectural Flanning and Design of Buildings"
CO7  CO of the co  CO1  CO2  CO3  CO4	Course "Architectural Flanning and Design of Buildings"  Able to relate various amenities and services including safety and land use zoning with respect to town planning  Able to describe the surious legal aspects and documentation for township from commencement to completion of project  Able to apply the principles of architectural planning and design considering features of green building  Able to recognize affects aspects and commenced of offinishing residual sturtures
CO of the c CO of the c CO1 CO2 CO3 CO4 CO5	Course "Architectural Flanning and Design of Buildings"  Also to relate various amentine and services including aftery and land use zoning with respect to town planning  Also to describe the various local appects and documentation for township from commencement to completion of project  Also to appect the principles of architectural planning and design considering features of green buildings.  Also to expect the principles of architectural planning and design considering features of green buildings.  Also to expect the principles of architectural participation of architectural planning and design considering features of green buildings.  Also to expect the principles of architectural participation of architectural planning and design considering features of green buildings.
CO of the c CO of the c CO1 CO2 CO3 CO4 CO5 CO6	Course "Architectural Flanning and Design of Buildings"  Able to relate various amendine and services including safety and land use zoning with respect to town planning  Able to describe the surious lead aspects and documentation for townshir from commencement to completion of project  Able to again the transplot of architectural planning and design considering features of green building  Able to recognize affects appeared and composering of arthrough resistant surfaces.  Able to agently and appeared and purposering townshire features of green building  Able to describe different building services and appeared townshire features.  Able to describe different building services and appeared townshire features.  Able to describe different building services and appeared townshire features.
CO7  CO of the co2  CO3  CO4  CO5  CO6  CO7	Conner "Architectural Planning and Design of Buildings"  Able to reduce various amention and services including safety and land use zoning with respect to town planning  Able to despite the various amention and decrumentation for township from common troot complete the various local adoption and decrumentation for township from common troot complete and for the various local adoption and design and apprive glowed-less to actual situation.  Able to describe different building services and plan readoration il publishes.  Able to complete design and plan readoration il publishes.
CO of the c CO of the c CO1 CO2 CO3 CO4 CO5 CO6	Course "Architectural Flanning and Design of Buildings"  Able to relate various amendine and services including safety and land use zoning with respect to town planning  Able to describe the surious lead aspects and documentation for townshir from commencement to completion of project  Able to again the transplot of architectural planning and design considering features of green building  Able to recognize affects appeared and composering of arthrough resistant surfaces.  Able to agently and appeared and purposering townshire features of green building  Able to describe different building services and appeared townshire features.  Able to describe different building services and appeared townshire features.  Able to describe different building services and appeared townshire features.
CO7  CO of the co  CO1  CO2  CO3  CO4  CO5  CO6  CO7  CO8	Conner "Architectural Planning and Design of Buildings"  Able to reduce various amenities and services including safety and land use zoning with respect to town planning  Able to reduce various amenities and decrementation for township from commencement to complete for a few points and decrementation for township from commencement to complete for a few points and decrementation for township from commencement to complete for a few points and commencement of complete for a few points and components of confusions and decision complete for a few points and components of confusions and few points and components of confusions and few points and few points and components of confusions and few points and components of confusions and few points and few points points few points and few points points few points and points and points point
CO7  CO of the co  CO1  CO2  CO3  CO4  CO5  CO6  CO7  CO8	Conner "Architectural Planning and Design of Buildings"  Able to reduce various amention and services including safety and land use zoning with respect to town planning  Able to despite the various amention and decrumentation for township from common troot complete the various local adoption and decrumentation for township from common troot complete and for the various local adoption and design and apprive glowed-less to actual situation.  Able to describe different building services and plan readoration il publishes.  Able to complete design and plan readoration il publishes.
CO7  CO of the to CO3  CO4  CO5  CO6  CO7  CO8  CO of the to CO of C	Conner "Architectural Planning and Design of Buildings"  Able to reduce various amenities and services including safety and land use zoning with respect to town planning  Able to reduce various amenities and decrementation for township from commencement to complete for a few points and decrementation for township from commencement to complete for a few points and decrementation for township from commencement to complete for a few points and commencement of complete for a few points and components of confusions and decision complete for a few points and components of confusions and few points and components of confusions and few points and few points and components of confusions and few points and components of confusions and few points and few points points few points and few points points few points and points and points point
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CO7  CO of the control of the contro	Able to reduce various smentites and services including safety and land use assing with respect to town planning.  Able to reduce various smentites and services including safety and land use assing with respect to town planning.  Able to able to describe the surious leard aspects and documentation for township from commencement to completion of project  Able to apply the principles of architectural journing and design considering features of press building.  Able to recording its feature states and components of entirelated resistant structure.  Able to recording its feature throught aspects and applying building releas and byelens.  Able to compile ideas and plan pathic: buildings.  Able to compile ideas and plan pathic: configuration, classification and fundamental concepts of structural analysis.  Able to explain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to compile ideas and expression of the configuration, classification and fundamental concepts of structural analysis.  Able to explain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to compile ideas and expression of the succession of the successio
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CO7  CO of the cost of the cos	Able to reduce various smentites and services including safety and land use assing with respect to trons planning.  Able to reduce various smentites and services including safety and land use assing with respect to trons planning.  Able to service the various logal aspects and discusseration for tronschip from consequence to completion of project.  Able to aspects the principles of aspects and components of entirbusial evidence from the services of press building.  Able to reconsiste soft aspects and components of entirbusial evidence includes and services and supplies to the nodes for a soft aspects and components of entirbusial evidence includes and services and supplies to asked valuation.  Able to complete does and data reductional through to pulpying buildings these and byteless.  Able to complete does and data reductional through to pulpying buildings these and byteless.  Course.* Structural Analysis I*  Able to explain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to complete does and destruction of bours, frames and trussed by applying appropriate method.  Able to make the configuration for determinate bours, trusses and applications of ILD  Able to make the force fine diagran for determinate bours, trusses and applications of ILD
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CO7  CO of the control of the contro	Able to reduce various smentites and services including safety and land use assing with respect to trons planning.  Able to reduce various smentites and services including safety and land use assing with respect to trons planning.  Able to service the various logal aspects and discusseration for tronschip from consequence to completion of project.  Able to aspects the principles of aspects and components of entirbusial evidence from the services of press building.  Able to reconsiste soft aspects and components of entirbusial evidence includes and services and supplies to the nodes for a soft aspects and components of entirbusial evidence includes and services and supplies to asked valuation.  Able to complete does and data reductional through to pulpying buildings these and byteless.  Able to complete does and data reductional through to pulpying buildings these and byteless.  Course.* Structural Analysis I*  Able to explain the basics of configuration, classification and fundamental concepts of structural analysis.  Able to complete does and destruction of bours, frames and trussed by applying appropriate method.  Able to make the configuration for determinate bours, trusses and applications of ILD  Able to make the force fine diagran for determinate bours, trusses and applications of ILD
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CO of the CO of	Corner *Architectural Planning and Design of Buildings*  Able to reduce various succeiving safety and land use zoning with respect to frow planning Able to reduce various succeiving safety and land use zoning with respect to frow planning Able to reduce various lead appress and documentation for tromship from commencement to completion of projects Able to expect the furnition of an adjustment and existion condition for troms of the publical services and components of earthquake resistant structure Able to describe the furnition building services and applient knowledge to exact structure. Able to describe the furnition of adjustment and troms of the expect is an adjustment and troms of
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CO 6	Able to describe the behavior and repair of concrete structures under adverse conditions.
CO of the	Course" Advanced Surveying"
	Able to carry out field geodetic survey and apply triangulation adjustment with modern equipment's
CO 2 CO 3	Able to perform Goodetic trigonometric leveling Able to perform Moderaphic unway and get solution for problems related to it
CO 4	Able to describe aerial photography and applications in civil engineering
CO 5	Able to explain Remote sensing and GIS and its application in civil engineering field
CO of the	Course " Project Management and Engineering Economics"
	Able to explain the importance, objective, and functions of project management Able to analyze the network for planning and scheduling of project  Able to analyze the network for planning and scheduling of project
CO 3	Able to apply project monitoring, resource allocation using project management software's
CO 4 CO 5	Able to apply a engineering economics in construction industry.  Able to apply concept of material management and implement safety norms
	Abbe to evaluate project appraisal and prepare project freshibits report and Detailed Project report
	Course " Structural Design II"
CO of the	Ourse STRIKMER PERSON II
COI	Able to distinguish different design philosophies of design of R.C structures and analyze the limitations and advantages of each
CO2 CO3	Able to apply different limit states for singly and doubly reinforced, balanced beam section and to design one way slabs Able to design two way slabs and staticrases
CO4	Able to design flexural members.
CO5 CO6	Able to design fleward members for shear, bond, torsion and design continuous beam with concept of redistribution of moments  Discuss the constraince and working of centrifugal and axid flow compressor with its analysis.
CO of the	Course " Environmental Engineering I"
COI	Able to describe sources and effects of noise and air pollution, evaluate its quality as per BIS
CO2	Able to identify a suitable water intake structure, describe water supply scheme and define water demand for a community
CO3 CO4	Able to design Aeration and Sedimentation processes with due importance to quality of water as per BIS  Able to design Coggulation, Flocculation and Filtration processes used for raw water treatment
CO5	Able to describe disinfection, water softening methods, demineralization, adsorption along with fluoridation and defluoridation techniques
CO6	Able to describe Rain water harvesting, packaged Water treatment plant and determine the capacity of ESR.
CO of the	Course" Foundation Engineering "
COI	Able to execute soil exploration
CO2	Ande to exclusion experience again.
CO3	Proficient to analyze consolidation and time rate settlements and able to recognize basic consolidation theory
	Able to classify piles and their uses, and calculate the load carrying capacity Able to describe there piles and problem associated with Ed. Col.  Able to describe there piles and problem associated with Ed. Col.
	Abbe to evaluate liquefaction potential and explain Geosynthetics and its application
CO of the	Course Dans and Hydraulies Structures*
CO1	Able to analyze and design gravity dam, earthen dam and check its stability
CO3	Able to explain generalized information regarding dams  Able to design hydraulic structures
CO4	
	Able to explain river training methods and design of guide bund
	Ande to explain neer training memons and overgin or gauce onno.  Able to explain hydropower engineering with respect to its components and functions
CO5	Aske to explain here transing network and ulwigh region to made.  Aske to explain here transing network and ulwigh region round.  Aske to explain here transing network and transit and transiers.  Course" Obsantits Surveying, Contracts and Tenders"
CO of the	Able to explain hydrogener engineering with respect to its components and functions.  Courses* Quantity Surveying, Contracts and Tenders**
CO of the	Able to explain hydroporer engineering with respect to its components and functions.  Centure "Outsith Survyring, Contracts and Tenders"  Able to describe types of estimates and Tenders of approximate estimate.  Able to describe types of estimates and implaneering Structures.
CO of the CO1 CO2 CO3	Able to explain hydropower engineering with respect to its components and functions  Cuerve" Quantity Surveving, Contracts and Tenders"  Able to describe types of estimates and importance of approximate estimate  Able rouges detailed estimate for Civil Engineering Structures  Able to administrate estimate (explications to meteory expectations) of civil and prepare the rate analysis
CO5  CO of the  CO1  CO2  CO3  CO4	Able to explain hydroporer engineering with respect to its components and functions.  Centure "Outsith Survyring, Contracts and Tenders"  Able to describe types of estimates and Tenders of approximate estimate.  Able to describe types of estimates and implaneering Structures.
CO5  CO of the  CO1  CO2  CO3  CO4  CO5	Able to explain hydroporer engineering with respect to its components and functions.  Centrus**  Centrus**  Able to describe types of estimates and Fenders*  Able to describe types of estimates and impatements Structures.  Able to end a structure of the structure of approximate estimate.  Able to end a structure of the structure of the structure.  Able to end a structure of the structure of the structure.  Able to define structure of the structure of approximate estimate.  Able to define structure of the structure of approximate estimate.  Able to define structure of approximate endered of valuation of approximate methods.
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO6	Able to explain bridgoposer engineering with respect to its components and functions  Course" Quantity Survering, Contracts and Tenders"  Able to describe types of estimates and importance of approximate estimate  Able represent detailed estimate for Could Engineering Structures  Able to admissible specifications to meet expectations of client and prepare the rate analysis.  Able to choose suitable method of valuation of property and implement it  Able to rechain execution of works in PVO and tendering.
CO5  CO of the CO2  CO3  CO4  CO5  CO6  CO of the CO of the CO of the CO	Able to explain bydroponer engineering with respect to its components and functions  Course" Quantity Surveying, Contracts and Tenders"  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates for Civil Engineering Structures  Able to describe types of estimate for Civil Engineering Structures  Able to describe types of estimate for Civil Engineering Structures  Able to describe types of estimate for Civil Engineering Structures  Able to describe types of estimate for Civil Engineering Structures  Able to describe types of estimate for Civil Engineering Structures  Able to describe types of estimate for Civil Engineering Structures  Able to describe types of estimate for Civil Engineering Structures  Able to Civil Engineering of works in PDV and tendering.  Able to illustrate meaning, validity, the conditions and leave of contract  Course" Construction Management"
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO6	Able to explain bridgeopour engineering with respect to its components and functions  Course" Quantity Surveying, Contracts and Tenders"  Able to describe type of estimates and importance of approximate estimate  Able processed stated estimate for Cold Engineering Structures  Able to describe type of estimates (and the contract of t
CO5  CO of the  CO1  CO2  CO3  CO4  CO5  CO6  CO of the  CO1  CO2  CO3	Able to explain hydroporer engineering with respect to its components and functions.  Centrus" Quantity Survyring, Contracts and Tenders"  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to real satisfied estimate for Coll Engineering Structures.  Able to real satisfied specifications to meet expectations of effects and prepare the rate analysis.  Able to estimate method of valuation of repress and importance in a satisfied and the satisfied and analysis of expects and importance in a satisfied and analysis.  Able to estimate expectation of works in PVD and tendering.  Centrus" Construction Management:  Able to explain the basics construction management.  Able to explain the basics construction management.  Able to explain the basics construction management and its measurement.
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO6  CO of the CO1  CO2  CO3  CO4	Able to explain hydrogeneer agricering with respect to its components and functions  Able to describe types of estimates and Trenders"  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to describe acceptation of under approximate estimate  Able to explain exception of under in PDD and tendering.  Able to internate meaning, which; the conditions and laws of contract  Central "Contraction Management"  Able to explain the basic construction management  Able to describe these laws and financial appears of construction projects  Able to describe these laws and financial appears of construction pulses and appears of construction under the appear of the projects and appears of the construction projects  Able to describe these laws and financial appears of construction pulses analyses.
CO5  CO of the  CO1  CO2  CO3  CO4  CO5  CO6  CO of the  CO1  CO2  CO3	Able to explain hydroporer engineering with respect to its components and functions.  Centrus" Quantity Survyring, Contracts and Tenders"  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to real satisfied estimate for Coll Engineering Structures.  Able to real satisfied specifications to meet expectations of effects and prepare the rate analysis.  Able to estimate method of valuation of repress and importance in a satisfied and the satisfied and analysis of expects and importance in a satisfied and analysis.  Able to estimate expectation of works in PVD and tendering.  Centrus" Construction Management:  Able to explain the basics construction management.  Able to explain the basics construction management.  Able to explain the basics construction management and its measurement.
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO of the:  CO of the:  CO2  CO3  CO4  CO5  CO5  CO6	Able to explain hydroporer engineering with respect to its commonsters and functions  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to reduce the end of estimates for Cutil Engineering Structures.  Able to real suitable specifications to meet expectations of effects and prepare the rate analysis.  Able to reduce structure in the end of valuations of effects and prepare the rate analysis.  Able to estimate execution of works in PWD and tendering.  Able to estimate execution of works in PWD and tendering.  Able to estimate execution of works to exceed a large execution of the end of execution of the end of execution of the end of execution
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO of the:  CO of the:  CO2  CO3  CO4  CO5  CO5  CO6	Able to explain hydropomer engineering with respect to its components and functions  Centure "Quantity Survyring, Contracts and Tenders"  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to real satisfied estimate for Coll Engineering Structures  Able to and satisfied especifications to meet expectations of effects and prepare the rate analysis  Able to real satisfied excluded estimates of approximate estimate  Able to replain execution of works in PWD and tendering  Able to illustrate employed in the exclusion and laws of contract  Centure" Construction Management"  Able to explain the basics construction scheduling and illustrate work study and its measurement  Able to independ construction scheduling and illustrate work study and its measurement  Able to describe these was affinancial and internation projects  Able to independ construction scheduling and illustrate work study and its measurement  Able to independ construction scheduling and illustrate work study and its measurement  Able to independ construction scheduling and illustrate work study and its measurement  Able to independ construction scheduling on illustrate work study and its measurement  Able to independ and analyze the rick involved in projects and perform value analyzes.
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO5  CO4  CO5  CO5  CO5  CO6  CO6  CO7  CO7  CO7  CO7  CO7  CO7	Able to explain hydrogenerary with respect to its comments and functions  Able to describe types of estimates and Frenders'  Able to describe types of estimates and irrectance of approximate estimate  Able to describe types of estimates and irrectance of approximate estimate  Able to describe types of estimates for Cili Engineering Structures  Able to defin satisfied specifications to meet expectations of estimates and expectation expectations of estimates and expectation expectations of estimates and expectation expectations of estimates and expectations of estimates and expectation expectations of estimates and expectation expectations of estimates and expectations of estimates and expectation expectations of estimates and expectations of estimates and expectation expectations.
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO1  CO2  CO3  CO4  CO2  CO3  CO4  CO5  CO5  CO6  CO1  CO5  CO6  CO1  CO5  CO5  CO6  CO6  CO7  CO7  CO7  CO7  CO7  CO7	Able to explain hydroporer engineering with respect to its components and functions  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to real statistical estimates for Cuil Engineering Structures.  Able to and suitable specifications to meet expectations of estimate and prepare the rate analysis.  Able to administration of such in PVDI and tendering.  Able to administration of such in PVDI and tendering.  Able to explain execution of social in PVDI and tendering.  Able to explain the basics construction suchdising and allowed or contract.  Course Construction Management:  Able to explain the basics construction scheduling and illustrate work study and its measurement.  Able to indicate the wast of function projects and professor of construction projects.  Able to indicate the wast of function projects and professor of construction projects.  Able to explain the basics construction engagement or construction projects.  Able to explain the down and function and and illustrate work study and its measurement.  Able to explain the down and function and and function projects and professor of construction of artificial intelligence in civil engineering.  Course Able to explain basic terminologies and applications of artificial intelligence in civil engineering.
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO1  CO2  CO3  CO4  CO5  CO6  CO1  CO2  CO3  CO6  CO of the:  CO1  CO3  CO6  CO of the:  CO1  CO3  CO6  CO0  CO0  CO0  CO0  CO0  CO0  CO0	Able to explain hydroporest engineering with respect to its commensus and functions.  Able to describe types of estimate and irreductors of approximate estimate.  Able to describe types of estimate for Carl Engineering Structures.  Able to define studied estimate for Carl Engineering Structures.  Able to all suitables specifications to meet expectations of client and prepare the rate analysis.  Able to all suitables specifications to meet expectations of client and prepare the rate analysis.  Able to adjust execution of works in PVDI and tendering.  Able to influentations, validity, the conditions and laws of contract  Contraction Management?  Able to explain the basics construction advantagement.  Able to explain the basics construction management.  Able to explain the basics construction management and its measurement.  Able to to explain the basics construction management and its measurement.  Able to to explain the basics and analyse the rate is irreduced in projects and preferent value analyses.  Able to explain the basics construction for measurement and prepared to the contraction of the same of faminate source and prepared to the contraction of the same of faminate source and prepared to the contraction of the same of faminate source and prepared to the contraction of the same of faminate source and prepared to the contraction of the same of the contraction of the contr
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO6  CO7  CO7  CO7  CO7  CO7  CO7	Able to explain Independent spirit properties the source of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to replace adulated estimate for Chill Entirecting Structures.  Able to destinate instead of source of approximate estimate.  Able to replain exception of works in PVDD and tendering.  Able to replain exception of works in PVDD and tendering.  Able to instead mention, validity, the conditions and leave of contract  Contract Construction Management*  Able to replain the basics construction suchdain and illustrate work study and its neasonment.  Able to replain the basics construction and adjustrate work study and its neasonment.  Able to instanting and adjustrate the risks insolved in protects and professor when an adjustrate work study and its neasonment.  Able to establish these terminologies and applications of artificial institutions or include and incompanies to the applications of artificial institutions or includent institutions or institution institutions or includent institutions or institution institutions or institution institutions or institution institutions or institution institution in institutions or institution institu
CO5  CO of the:  CO1  CO2  CO3  CO6  CO6  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO5  CO6  CO6  CO6  CO7  CO7  CO7  CO7  CO7	Able to explain Independent spirit propert in its components and functions  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to require distinate for Child Entirection Structures  Able to destinate include estimate for Child Entirection Structures  Able to destinate include exhibit of valuation of represery and importance and the structure of the structure
CO5  CO of the:  CO1  CO2  CO3  CO6  CO6  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO5  CO6  CO6  CO6  CO7  CO7  CO7  CO7  CO7	Able to explain Independent spirit properties the source of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to describe types of estimates and importance of approximate estimate.  Able to replace adulated estimate for Chill Entirecting Structures.  Able to destinate instead of source of approximate estimate.  Able to replain exception of works in PVDD and tendering.  Able to replain exception of works in PVDD and tendering.  Able to instead mention, validity, the conditions and leave of contract  Contract Construction Management*  Able to replain the basics construction suchdain and illustrate work study and its neasonment.  Able to replain the basics construction and adjustrate work study and its neasonment.  Able to instanting and adjustrate the risks insolved in protects and professor when an adjustrate work study and its neasonment.  Able to establish these terminologies and applications of artificial institutions or include and incompanies to the applications of artificial institutions or includent institutions or institution institutions or includent institutions or includent institutions or institution institutions or institution institutions or institution institution institution institutions or institution
CO5  CO of the:  CO1  CO2  CO3  CO6  CO6  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO5  CO6  CO6  CO6  CO7  CO7  CO7  CO7  CO7	Able to explain Independent spirit propert in its components and functions  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to describe types of estimates and importance of approximate estimate  Able to require distinate for Child Entirection Structures  Able to destinate include estimate for Child Entirection Structures  Able to destinate include exhibit of valuation of represery and importance and the structure of the structure
COS of the	Able to explain hydroponer engineering with respect to its components and functions  Able to describe types of estimates and insportance of approximate estimate  Able to describe types of estimates and insportance of approximate estimate  Able to describe types of estimates and insportance of approximate estimate  Able to read that statistic specifications to meet expectation of referred and prepare the rate analysis  Able to read that statistic specifications to meet expectation of referred and insportance of approximate estimate  Able to read that statistic specifications to meet expectation of referred and insportance of approximate estimate  Able to read that statistic specifications to referred and insportance of approximate estimate and able to describe and approximate probability and approximate estimate and able to describe and approximate estimate
COS of the	Able to explain independent contracts and Tenders"  Able to recognize stated estimates of contracts and Tenders of approximate contracts and tenders and tende
COS of the	Able to equalite Indusposer engineering with respect to its components and functions  Able to describe types of estimate and importance of agreeosynate estimate  Able to describe types of estimate and importance of agreeosynate estimate  Able to describe types of estimate and importance of agreeosynate estimate  Able to engineering estimate for CNI Engineering Structures  Able to admit unitable specification to more expecutation of estimate and prepare the rate analysis  Able to choose unitable method of volustion of orgency and importance in 14  Able to explain execution of works in PVD and tendering.  Able to the unitable method of volustion of orgency and importance in 14  Able to explain exception of works in PVD and tendering.  Able to interest membrane, sublish, the continuous and less of centred:  Course" Construction Management"  Able to explain the basics construction measurement  Able to interest construction in the ability and it interest work study and its measurement  Able to describe their less and function in press of construction reports.  Able to describe their less and function in press and estimates work study and its measurement  Able to explain their and analyses for raks increded in respects and estimates.  Able to explain their and analyses for raks increded in respects and estimates increded in respects and estimates and analyses for raks increded in respects and estimates increded in respects and estima
CO of the CO of	Able to explain hydropower engineering with respect to its components and functions  Course" Quantity Surveing. Contracts and Tenders"  Able to describe types of estimates and importance of agreeossimate estimate  Able to describe types of estimates and importance of agreeossimate estimate  Able to explain execution of works in PVD and tendering.  Able to choose unabling the model of valuation of reperty and pregnance in I.  Able to explain execution of works in PVD and tendering.  Able to describe the model of valuation of orgenty and pregnance in I.  Able to explain execution of works in PVD and tendering.  Able to explain execution of works in PVD and tendering.  Able to interest intermine, validity, the contribution and less of contract.  Able to explain execution of works in PVD and tendering.  Able to explain the basics construction and explain and tender of contract.  Able to explain the basics construction in submement  Able to explain the time and function and explain and all filterative work and preferred in the explain and and the time recovers and explain the submement of the submembers and explain the submembers and public transport system.  London and the submembers and explain the submembers and public transport system.  London and the submembers and explain the submembers and public transport system.  London and the submembers and explain the submembers and public transport system.  London and the submembers and explain the submembers and explain the submembers and explain the submembers and
CO of the CO of	Able to capabile hydrogenering contracts and Tenders"  Able to describe types of estimates and importance estimate and the property and importance in the property and importance
COS  CO of the  COI  COI  COI  COI  COI  COS  COS  COS	Able to explain beforeover engineering with respect to its components and functions  Central Obstantis Surviving. Centracts and Tenders  Able to conscribe tapies of estimate for Cell Impainment of growtones estimate  Able to response the state of estimate for Cell Impainment of growtones estimate  Able to conscribe tapies of estimate for Cell Impainment of growtones of sites and prepare the near analysis.  Able to reduce the state of the state of the confidence of the state of the confidence o
COS	Able to explain hydropower engineering with respect to its components and functions  Able to describe types of estimates and Tenders growth and the second of the second o
COS   CO of the	Able to explain beforeover engineering with respect to in components and functions  Centres**  Able to describe types of estimate and importance of agreeosimate estimate  Able to describe types of estimate and importance of agreeosimate estimate  Able to describe types of estimate and importance of agreeosimate estimate  Able to choose suitable method of valuation of reperty and prepare the rate analysis  Able to choose suitable method of valuation of openeyry and prepare the 1.  Able to explain execution of works in PVD and tendering.  Able to include the method of valuation of openeyry and prepare the 1.  Able to explain execution of works in PVD and tendering.  Able to explain execution of works in PVD and tendering.  Able to explain the basics construction and tendering and tillustrate work enday and its resourcement  Able to explain the basics construction instancement  Able to explain the basics construction measurement  Able to explain the basics construction in the contraction and explain the basic construction in the contraction and explain the basic construction and explain the contraction and e
COS	Able to explain beforeover engineering with respect to in components and functions  Central Quantity Surviving. Contracts and Tenders"  Able to describe types of estimate, and importance of approximate estimate  Able to describe types of estimate in and importance of approximate estimate  Able to destribe types of estimate for CNII Estimaterins Structures  Able to administrate specifications to more expecutations of electrate and prepara the rate analysis  Able to complain exception of works in PVD and tendering.  Able to complain exception of works in PVD and tendering.  Able to inflammation, validably, the condition and laws of contract  Contract Construction Management  Able to replain the basics construction measurement.  Able to replain the basics construction of works and of the structure of the st
COS  Of the COS  Of the COS  OO of t	Able to espekin beforeover engineering with respect to in components and functions  Centres**  Able to describe types of estimate and importance of agreeous mate estimate  Able to describe types of estimate and importance of agreeous mate estimate  Able to describe types of estimate in the components estimate  Able to describe types of estimate on the expectation of estimate prepart the rate analysis  Able to choose unsitiate mothod of volution of orgenty and prepart the rate analysis  Able to choose unsitiate mothod of volution of orgenty and prepart the rate analysis  Able to estimate in mothod of solution of orgenty and prepart the rate analysis  Able to estimate in mothod of volution of orgenty and implement in  Able to estimate in mothod of volution of orgenty and implement in  Able to estimate the basic construction of whole in an all interests work study and its measurement  Able to estimate and analysis of the volution o

CO6	Understand the basic concept of probability, random variables & random signals and develop the ability to find correlation, CDF, PDF and probability of a given event
CO of the	Course "Electronics Devices & Circuits"
COULTE	ANTONIO DE TRACE DE CALINO
	Toanalyze and design configuration of JFET circuit and calculate the small signal performance parameters.
	Analyze and implement FET circuits to test the performance. Analyze and midd MOSFET for smill signal at low frequency.  Analyze and model MOSFET for smill signal at low frequency.
	Analyze and moot swood of 100 SPEEL signals and Uniform Conference of 100 SPEEL signals and Conference of 100 SPEEL signals and Uniform Conference of 100
	Understand and apply concept of feedback to improve stability of circuits.
CO6	Design an adjustable voltage regulator circuits.
CO of the	Course "Data Structures and Algorithms"
CO of the	Ourse Data Structures and Argorithms
	Discuss the computational efficiency of the principal algorithms such as sorting &Searching.
CO2 CO3	Write and understand the programs that use arraw & pointers in C Describe how arrays, process, linded statutes are represented in memory and Use them in algorithms
	Describe now arrays, reconse, mucous supriciness are represented in menory and Ose them in algorithms Implement stack & queues for vitors applications Implement stack & queues for vito
CO5	Understand various terminologies and traversals of trees and use them for various Applications
CO6	Understand various terminologies and traversals of graphs and use them for Various applications
CO of the	Course "Electrical Circuits and Machines"
CO or the	COLOR ESCUENT CATALOG AND ASSESSMENT
COl	Analyze basic AC & DC circuit for voltage, current and power by using KVL,KCL, and network theorems
	Design and analyze transformers.  Explain the workly transformers.  Explain the workly principle of different electrical machines.
	Expansi use working principle or university two identities to assess the state of the control method for given industrial application.  To understand & develop the capturity two identities to assess the state of the control method for given industrial application.
	To understand & develop the capability to identify and select suitable 3 phase induction motor and its speed control method for given industrial application.
CO6	To understand & develop the capability to identify and select suitable special purpose motor and its speed control method for given industrial application
CO of the	Course "Digital Electronics"
CO1	Lise the basic logic gates and various reduction techniques of digital logic circuit in detail
CO2 CO3	The ability to analyze understands and designs various combinational and sequential circuis To introduce the concept of memories, regnammable logic devices and dejath IC S  S
	Understand the architecture and use of microcontrollers for basic operations and Simulate using simulation software
CO of the	Course "Microcontrollers"
CO I	Recall the basic concepts of microcontroller. Understand architecture, features and instructions of typical 8 bit microcontroller Intel 8051.
	Apply knowledge of microcontrollers to interface and program simple devices. Understand the application of software and hardware tools.
CO 3 CO4	Adapt the concepts of microcontroller to design and develop real world application
	Learn the architecture and features of PEC microcontroller.  Apply knowledge of embedded c programming, interfacing devices and make use of these concepts to develop real world applications.
CO6	Apply knowledge of embedded c programming, interfacing devices and make use of various communication protocols to interface real world devices.
CO of the	Course "Digital Communication"
CO I	Enderstand working of waveform coding techniques and analyze their performance.
	Discriminate & select line code in terms of B W. & bit rate and able to apply concept of synchronization , scrambler & ISI in application
	Discriminate different random processes and apply its knowledge for designing digital communication system.
	Describe coherent detection and evaluate error performance of a digital receiver in presence of noise and other interferences.  Design & analyse efference coherent & non coherent pass bearing and transmission system in terms of probability of error & power spectrum
CO6	Describe the concept of spread spectrum techniques & apply direct sequence spread spectrum & frequency hop spread spectrum in communication system
	Describe the concept of spread spectrum techniques. A gaphy direct sequence spread spectrum & frequency hop spread spectrum in communication system  Course "Bigital Signal Processing"
CO of the	Corne "Bigial Signal Processing"  [Indextruot analysis and processing of digital signal
CO of the	Course "Digital Signal Pracessing"  [Inderstand analytic adversaria of digital signal   [Inderstand analytic adaptocounts of DFT and appreciate the FFT processing
CO of the	Course "Digital Signal Processing"  Understand analysis and processing of digital signal  Lindentand for fast computation of DFT and appreciate the FFT processing  Perform time, frequency and 2 -transform analysis on signals and systems.
CO of the CO 1 CO 2 CO 3 CO 4	Course "Digital Signal Pracessing"  [Inderstand analytic adversaria of digital signal   [Inderstand analytic adaptocounts of DFT and appreciate the FFT processing
CO of the CO 1 CO 2 CO 3 CO 4	Course "Nigital Signal Processing"  Todestand manlysis and processing of digital signal  Todestand the first computation of DFT and appreciate the FFT processing  Perform time, frequency and Z transform analysis on signals and systems.  Design a digital first on given specification of analon filter with surface.
CO of the CO 1 CO 2 CO 3 CO 4 CO 5	Course "Digital Signal Processing"  Understand analysis and excessing of digital signal  Understand analysis and excessing of digital signal  Understand the first computation of DFT and appreciate the PFT processing  Proferront time, frequency and Z- entantion manufactor on against and systems.  Designs a digital filter for a given specification of analog filter with warpings effect and finite length word effects  Designs the digital filter from piece specification of digital filter owing significance of various filter structures  Understand the real-world signal excessing applications.
CO of the:  CO 1  CO 2  CO 3  CO 4  CO 5  CO 6	Course "Digital Signal Processing"  [Indentural analysis and processing of digital signal  [Indentural analysis and processing of digital signal  [Indentural the fast computation of DFT and approxima the FFT processing  [Proferm time, Prospers and 2- Arranform marks on signals and systems.  [Design as signal filter for a given specification of analog filter with warging effect and finite length word effects  [Design as signal filter from given specification of digital filter using specificacion of visions filter attractives.]
CO of the CO 1 CO 2 CO 3 CO 4 CO 5 CO 6 CO of the CO 1	Course "Digital Signal Processing"  Understand analysis and processing of digital signal Understand the first Competition of DPT and appreciate the FPT processing.  Perform time, frequency and Z-transform analysis, on signals and vestoms.  Perform time, frequency and Z-transform analysis, on signals and vestoms.  Design the digital filter fram price a precision of analysis flave with wagning effect and finite length word effects.  Design the digital filter fram price specification of digital filter using sugnificance of various filter structures  [Indextormal the real word signal processing applications.  Course "Electromagnetics"  Apply and understand the basis multivariated concepts related to electromagnetic vector fields.
CO of the:  CO 1  CO 2  CO 3  CO 4  CO 5  CO 6  CO of the:  CO 1  CO 2	Course "Digital Signal Processing"  Understand, analysis and processing of digital signal  Understand for fact computation of DFT and appreciate the PFT processing  Understand the fact computation of DFT and appreciate the PFT processing  Designs a digital filter for a given specification of analog filter with suspines effect and finish length word effects  Designs the digital filter for a given specification of adaption filter using significance of various filter structures  Understand the real-world signal processing applications.  Course "Electromagnetics"  Apply and understand the basic smallerministic concepts related to electromagnetic vector fields.
CO of the CO of	Course "Digital Signal Processing"  Understand analysis and processing of digital signal Understand analysis and processing of digital signal Understand the fast computation of DPT and apprecise the IPT processing Profess in time, frequency and Z-transform analysis on signals and vestures. Professing admit all these a given specification of analog filter with wagning effect and finite length word effects Design the digital filter from piece a percelication of digital filter owing significance of various filter structures Control Electromagnetics  Course "Electromagnetics"  Apply and understand the basic mathematical concepts related to electromagnetic vector fields.  To understand principles of electrotatics to the solution of problem relating to temperic fields, boundary conditions and electric energy density.  Apply principles for approximation is to the solution of problem relating to temperic field to unquest in density.
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CO of the CO of	Consec "Digital Signal Processing"  Understand analysis and recessing of digital signal  Understand the first computation of DFT and appreciate the PFT processing  Understand the first computation of DFT and appreciate the PFT processing  Understand the first computation of DFT and appreciate the PFT processing  Design the digital filter for a given specification of analog filter with warpings effect and finite length word effects  Design the digital filter for a given specification of digital filter to write spignificance of various filter structures  Understand the read world signal processing applications.  Conner **End tumorganistic**  Apply and understand the basis compensation to security of the spice of the structures to the solutions of problems relating to dischorrorise, electric field, boundary conditions and electric energy density.  Apply principles of magnetostatics to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.  To understand the configer related to Franchise to less and Marwell* to see and forcest to less of the solutions.
CO of the:  CO 1  CO 2  CO 3  CO 4  CO 5  CO 6  CO of the:  CO 1  CO 2  CO 3  CO 4  CO 6	Course "Digital Signal Processing"  Linderstand analysis and processing of digital signal  Linderstand the fast composation of DFT and approxisis the FFT processing  Perform time, frequency and Z. standform analysis on signals and vostem.  Design a digital filter from given specification of analysis on signals and vostem.  Design a digital filter from given specification of analysis flavor satisfacts and finite length word effects  Design the digital filter from given specification of digital filter using significance of various filter structures  Coloreac "Electromagnetics"  Apply and understand the basic mathematical concepts related to electromagnetic vector fields.  To understand principles of electrostatics to the solutions of problem relating to delectrics, electric field, boundary conditions and electric energy density.  To understand the concepts related to francher's low and deserving concepts of the dark analyse to the municipation for problem relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.  To understand the concepts related to Faradov's low and Marwell's equations.  Discons the construction and working of contributal and stall flow compressor with its analysis.
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CO of the CO 1 CO 2 CO 3 CO 4 CO 5 CO 6 CO 1 CO 2 CO 3 CO 6	Consec "Digital Signal Processing"  Understand analysis and excessing of digital signal  Understand analysis and excessing of digital signal  Understand the first computation of DFT and appreciate the PFT processing  Understand the first computation of DFT and appreciate the PFT processing  Proferron lane, frequency and Z- rannels manalysis on signals and systems.  Designs the signal first for a given specification of analog fiftee the waying effects and finis length word effects.  Designs the signal first from piece specification of signal first or using significance of various fifter structures  Understand the read-world signal processing applications.  Corner "Exect tumorganatio"  Landerstand friends of electrostatics to the solutions of problems relating to negative field. Doundary conditions and electric energy density.  Apply ampricises of magnetostatics to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.  Landerstand from expert related to Erachest size and Metwerl's guarations.  Analyses the transmission line quodeline, use until charles for impedance marching.  Discource the constraints of a quodeline of contributal and axial flow compressor with its analysis.  Corner "Mechatronics"  Mentitication of key elements of mechatronics events and a temperate processation in terms of block disacram.
CO of the:  CO 1 CO 2 CO 3 CO 4 CO 5 CO 6  CO of the:  CO 1 CO 2 CO 5 CO 6  CO 0 f the:  CO 1 CO 5 CO 6 CO 0 f the:	Course "Digital Signal Processing"  Linderstand analysis and processing of digital signal  Linderstand the fast composation of DFT and approximate the FFT processing  Perform time, frequency and Z. standform analysis on signals and evoterns.  Design a digital filter from given specification of analysis on signals and evoterns.  Design a digital filter from given specification of analysis filter using significance of various filter structures  Design the digital filter from price specification of digital filter using significance of various filter structures  Design the digital filter from price specification of digital filter using significance of various filter structures  Design the digital filter from price specification of digital filter using significance of various filter structures  Control "Electromagnetics"  Apply and understand the basic mathematical concepts related to electromagnetic vector fields.  To understand principles of electricatatics to the solutions of problem relating to delectrics, electric field, boundary conditions and electric energy density.  To understand the concepts related to Fundary's low and Marwell's equations.  Landwaye the transmission line problem, use worth therefore muchding  Discous the construction and working of centrifunal and stall flow compressor with its analysis.  Control "Mechatronics"  Linderstanding books incipated security and a stall flow compressor with its analysis.  Control "Mechatronics"
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CO of the:  CO 1  CO 2  CO 3  CO 4  CO 5  CO 6  CO of the:  CO 1  CO 5  CO 6  CO 01  CO 02  CO 3  CO 4  CO 02  CO 3  CO 1  CO 02  CO 3  CO 4  CO 02  CO 3  CO 4  CO 05  CO 6  CO 06  CO 07  CO	Corner "Digital Signal Processing"  [Sinderstand analysis and processing of digital signal [Sinderstand analysis and processing of digital signal [Sinderstand the first computation of DFT and appreciate the PFT processing [Proferront time, forespore and 2- frameform analysis on signals and system.  Design as digital filter for a given specification of analog filter with warping effect and finish kepth wood effects [Design the digital filter for a given specification of adaptial filter to using significance of various filter structures [Sinderstand the real-world signal processing applications.  Corner "Excitomagnetics"  Apply and understand the basic multiple of the structures of the str
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CO of the CO of	Correr "Digital Signal Processing"  Lindentural analysis and processing of digital signal  Chadentural hash in an diversion of digital signal  Chadentural hash in an experiment of the processing of the profession of the processing of the profession of the processing and system.  Designs a signal filter for a given specification of analog filter with varging effect and finite length word effects  Designs the signal filter for a given specification of adaptic filter using sympticane or various filter exerctures  (Indertural the real world signal processing applications.)  Course "Electromagnetics"  Apply and understand the basic analogenation of problems relating to delectricity, electric field, boundary conditions and electric energy density.  Apply missiple of imagnetization to the oblitions of problems relating to the delectricity, electric field, boundary conditions and unpertect energy density.  Apply missiple of imagnetizations to the oblitions of problems relating to the interest the consequent visited to Famely to the and Market 41 countries.  Analyze for transmission in the problems out on the characteristic to the substitute of imagenetization to the oblitions of problems relating to magnetic field and imagenetic energy density.  Analyze for transmission filter problems, our world, that for impedance maching of the transmission filter problems, our world, that for impedance maching of the transmission filter problems on an workfair of centralized and sealed filter countries.  Course "Mechatronics"  Lindentual countries of activated and seasons and transmission of the obligation of the center of actuation.  Course "Strekthermines"  Apply Basic knowledge of durial electronics to construct and demonstrate durial system design and part profession of recogning posteron units procession in the obligation of the countries of sections of the countries in construct and demonstrate durial system design and part processing the development of the countries in chief design and in the design of procession of the coun
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CO of the CO of	Corres "Digidal Signal Processing"    General Analysis and processing of digital signal     General Analysis and processing of digital signal     General Analysis and processing of digital signal     General Analysis of the program of 2 - random analysis on signals and system.   Design a signal filter for a given securification of adapts filter with surginar effect and finish kepth wood effects   Design the signal filter for a given securification of adapts filter with surginar effect and finish kepth wood effects   Design the signal filter for a given securification of adapts filter with surginar effects of control of the state of the signal processing applications.   General Control of the signal processing application of the electromagnetic sector fields.   General Control of the signal processing and the basic mathematical concepts related to practice, electric field, boundary conditions and magnetic energy density.   Apply principles of magnetostatics to the solutions of problems relating to delectricis, electric field, boundary conditions and magnetic energy density.   General Conference of the state of the signal processing to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.   General Conference of the state of the state of the signal processing of centrification and solution of central part and activities of the state of
CO of the CO of	Conver "Phigial Signal Processing"  Dedented analysis and execution of digital signal  Dedented analysis and execution of digital signal  Design a signal filter for a given segurification of analysis filter with varging effect and finite length word effects  Design a signal filter for a given segurification of analysis filter with varging effect and finite length word effects  Design the digital filter for a given segurification of adjust filter was quignificance of various filter structures  (Design the digital filter for a given segurification of digital filter to many supplicance of various filter structures  (Design the digital filter for a given segurification of digital filter was quignificance of various filter structures  (Design the digital filter for a given segurification of digital filter was quignificance of various filter structures  (Design and understand the real world signal mercessing applications.)  (Design and understand the basic mathematical concepts related to electromassureit vector fields.)  To understand institute of electromassureits with the various process of the electromassureits and electric memory density.  Apply manyloids of magazinets to electromassureits to the segurity of the process of the electromassure
CO of the CO of	Corres "Digidal Signal Processing"    General Analysis and processing of digital signal     General Analysis and processing of digital signal     General Analysis and processing of digital signal     General Analysis of the program of 2 - random analysis on signals and system.   Design a signal filter for a given securification of adapts filter with surginar effect and finish kepth wood effects   Design the signal filter for a given securification of adapts filter with surginar effect and finish kepth wood effects   Design the signal filter for a given securification of adapts filter with surginar effects of control of the state of the signal processing applications.   General Control of the signal processing application of the electromagnetic sector fields.   General Control of the signal processing and the basic mathematical concepts related to practice, electric field, boundary conditions and magnetic energy density.   Apply principles of magnetostatics to the solutions of problems relating to delectricis, electric field, boundary conditions and magnetic energy density.   General Conference of the state of the signal processing to the solutions of problems relating to magnetic field and magnetic potential, boundary conditions and magnetic energy density.   General Conference of the state of the state of the signal processing of centrification and solution of central part and activities of the state of

	Explain the concept of digital image processing and perform the basic operations on image
CO2	Compare, analyze and interpret the different image enhancement, filtering and restoration techniques in spatial domain and frequency domain.
CO3	Describe the different image coding and compression techniques.
CO4	Illustrate and imply different image segmentation and morphological techniques.
CO5	Represent and describe images with various descriptors
CO6	Interpret feature and natterns for the descriptors and apply various image analysis methods for image processing applications
CO of the	Course "Computer Networks"
COurtie	Course Computer Networks
COI	Understand state-of-the-art in network protocols, architectures, and applications.
CO2	Uncertained state-on-time-air in memoria, prantice practices, are appreciated, and present a fine of the prese
CO3	Define the basic terminology of metions used an Outline the basic network configurations
CO4	Activity to the Management of the State of t
CO5	List the layers of the TCP/FP and OSI model and describe the duties of each layer
	Land use a state the transversion methods underlying LAN and WAN technologies  Understand the transversion methods underlying LAN and WAN technologies  Understand the contraspection of the Contraspe
CO of the	Course "Electronics Product Design"
CO I	Understand various stages of hardware, software and PCB design.
CO 2	Importance of product test & test specifications.
CO 3	Special design considerations and importance of documentation
Departmen	nt of Electronics and Telecommunication Engineering
Semester -	II .
l	
CO of the	Course "Control Systems"
COI	
CO2	Model a physical and electrical system and express its input output relationships by means of block diagrams and Signal flow graph.
CO2 CO3	Analyze a linear control system in time and frequency domain using graphical methods for stability.  Model and surbane the control system in time and frequency domain using graphical methods for stability.
CO3	Model and analyze the control system using sates space analysis.  Introduce the control system using sates space analysis.
CO4	THE COUNTY OF THE COUNTY OF THE STATE OF THE
CO of the	Course "Mathematics"
- or the	
COI	Apply knowledge of higher order linear differential equations to LCR circuits.
CO2	reprise transforms, from the transform and the transform and inverse Z transform and apply them to solve difference equations in Linear time invariant system.
CO3	Analyze the data to fit an interpolating polynomial and evaluate numerical integration and differentiation. Find numerical solutions to differential equations.
CO4	Apply concept of vector differential calculus to fluid mechanics and various engineering applications.
CO5	Apply knowledge of vector integral calculus in fluid mechanics and various engineering applications.
CO6	Apply knowledge of Cauchy's Integral Formula to evaluate complex line integrals and to evaluate real integrals by Residue Theorem.
CO of the	Course "Analog communication"
CO1	Explain various components of electronic communication system and describe the various amplitude modulation techniques.
CO2	Analyze the AM radio receiver and evaluate the radio receiver performance parameters.
CO3	Describe the mathematical analysis of FM with frequency spectrum.
CO4	Demonstrate the FM radio receiver and describe the FM detection techniques.
	Analyze performance analysis of analog communication systems in the presence of noise.
CO5	
CO6	Tamping performance using rich manife chinary for the state of the person on manife.  Describe analogy methods are mediation and an advantage of the person
CO6	Describe analog pulse modulation and digital pulse modulation techniques.
CO6	
CO of the	Describe analog pulse modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"
CO of the	Describe analog pulse modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object oriented programming.
CO of the	Describe due principles of object of reinted Programming*  Describe the principles of object of circular page management of the company of th
CO of the	Describe audog pulse modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object oriented grogramming.  Apply the concepts of data enapopulation, inheritance in C++.  Understand basis recognized and a page 1 pa
CO of the CO1 CO2 CO3	Describe analog gate modulation and digital gate modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object oriented programming.  Apply the concepts of date encoparation in their interface in C++.  Understand basis recoram constraints in Para.  And whe the concept of classes, methods and inheritance to twite programs Janu.
CO of the CO1 CO2 CO3 CO4	Describe analog pulse modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object oriented programming.  Apply the concepts of data encapsulation, inheritance in C+  Understand basis program constructs in Jan.  Apply the concept of data encapsulation, inheritance in C+  Apply the concept of data encapsulation, inheritance in C+  Understand basis program constructs in Jan.  Apply the concept of classes, methods and inheritance to write programs Jan.  Understand basis production and interfacts to write programs in Jan.
CO of the CO1 CO2 CO3 CO4 CO5 CO6	Describe analog pulse modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object referented programming.  Apply the concepts of date encapelation, inheritance in C+-  Landerman Basic programming in C+-  Apply the concepts of date encapelation, inheritance in C+-  Landerman Basic program constructs in Basic Active and Apply the concept of clauses, methods and inheritance to write programs Java.  Landerman Basic program distings concepts and interface to write programs in Java.  Describe and use the concepts in Java to develop user friendly reorgam.
CO of the CO1 CO2 CO3 CO4 CO5 CO6	Describe analog pulse modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object oriented programming.  Apply the concepts of data encapsulation, inheritance in C+  Understand basis program constructs in Jan.  Apply the concept of data encapsulation, inheritance in C+  Apply the concept of data encapsulation, inheritance in C+  Understand basis program constructs in Jan.  Apply the concept of classes, methods and inheritance to write programs Jan.  Understand basis production and interfacts to write programs in Jan.
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CO6  CO of thee  CO1  CO2  CO3  CO4  CO5  CO6  CO of thee  CO1  CO2	Describe model patter modelation and digital pulse modelation techniques.  Course "Object Oriented Programming"  Describe the principles of object celested programmine.  Aprily the concepts of date encapsitation, inheritance in C++.  Calcelound basis program constructs in Enr.  Agric the concept of clauses, methods and inheritance to write program in Enr.  Agric the concept of clauses, methods and inheritance to write program in Enr.  Describe and makes program of the concept of clauses, methods and inheritance to write program in Enr.  Describe and use the concept of clauses, methods and inheritance to write program.  Describe and use the concept of clauses, methods and inheritance to write program.  Course "Integrated Circuis"  Limitance Subsis building block of an operational Amplifer and identify closed loop configurations of an op-amp.  Analyse, Design and Implement linear and non-linear applications of an op-amp.
CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO3  CO3  CO4  CO3  CO4  CO5  CO5  CO5  CO6  CO7  CO7  CO7  CO7  CO7  CO7  CO7	Describe analog under modulation and digital pulse modulation techniques.    Course "Object Oriented Programming"
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CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4	Describe analog under modulation and digital pulse modulation techniques.    Course "Object Oriented Programming"
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CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO2  CO3  CO4  CO5  COCO  COC	Describe modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object sciented programming.  Describe the principles of object sciented programming.  Apply the concept of data computation, indentinuous in C++.  Understand basis program contracts in June Apply the concept of datase, melbods and inheritance in view.  Lederstand basis program contracts in June Apply the concept of datase, melbods and inheritance in view programs June.  Describe and the time concepts and interface to write programs June.  Describe and use the concepts in June 1
CO6  CO of the co2  CO3  CO4  CO5  CO6  CO of the co2  CO1  CO2  CO3  CO4  CO2  CO3  CO4  CO2  CO3  CO4  CO4  CO5  CO5  CO5  CO5  CO5  CO5	Describe analog under modulation and digital pulse modulation techniques.  Course Chipter Oriented Programming*  Describe the principles of object oriented programming.  Describe the principles of object oriented programming.  Describe the principles of object oriented programming.  Algeby the concept of data encapsulation, inchestrates in 12°+.  Understand basic recognic constructs in Para Agryb the concept of data, examples and interfaces to write program in Para.  Describe and see the concepts in Para to develop user friendly recognic.  Describe and see the concepts in Para to develop user friendly recognic.  Course "Integrated Circuits"  Introduce basic building blocks of an operational Angulifer and identify closed long configurations of an op-amp.  Analyse, Design and Emplement linear and non-linear applications of an op-amp.  Analyse, Design and Emplement linear and non-linear applications of an op-amp.  Apply the functionalities of PLL to different applications and to memorize the concept of Oscillator.  Course "Advanced Processors"  Describe ARM interroprocessors and Albebytes and its feature.
CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO1  CO2  CO3  CO4  CO1  CO2  CO3  CO4  CO1  CO2  CO3  CO4  CO1  CO1  CO1  CO1  CO1  CO1  CO1	Describe model protested Programming."  Describe the principles of object sectional programming.  Ladentinal basic program contracts in Juria Ladentinal basic program contracts and interface to write programs in Juria Ladentinal basic program contracts and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentina Contract Processor "  Describe the ARM microprocessor architectures and its feature.  Ladentina Contract Ladentina Ladentina the Ladentina Ladentin
CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO2  CO3  CO4  CO5  CO5  CO5  CO5  CO5  CO5  CO5	Describe analog under modulation and digital pulse modulation techniques.    Course Children Course
CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO of the:	Describe model protested Programming."  Describe the principles of object sectional programming.  Ladentinal basic program contracts in Juria Ladentinal basic program contracts and interface to write programs in Juria Ladentinal basic program contracts and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentinal basic programs and interface to write programs in Juria Ladentina Contract Processor "  Describe the ARM microprocessor architectures and its feature.  Ladentina Contract Ladentina Ladentina the Ladentina Ladentin
CO6  CO of the:  CO1  CO2  CO3  CO6  CO of the:  CO1  CO2  CO3  CO4  CO of the:	Describe model protested Programming."  Describe the principles of object sciented congramming.  Apply the concepts of data encapatation in destination in C++.  Educational basic program contracts in Invs.  Apply the concepts of classes, methods and interface to write programs love.  Educational basic program contracts in Invs.  Apply the concepts of classes, methods and interface to write programs love.  Educational basic program contracts in Invs.  Describe and such description of the Invs.  Educational basic program contracts in Invs.  Describe and such description of the Invs.  Educational basic program contracts in Invs.  Describe and such description of the Invs.  Course "Integrated Circuits"  Introduce basic building blocks of an operational Amplifier and identify closed loop configurations of an op-amp.  Analyse, Design and Implement linear and non-linear applications of an op-amp.  Distinguish, Formulate and Demonstrate various converters using op-amp.  Course "Advanced Processor"  Describe the ARM microprocessor architectures and its feature.  Linearies "Advanced Processor"  Lord ISSP Processors and resources for signal processing applications.  Lord ISSP Processor and resources for signal processing applications.
CO6  CO of the:  CO1  CO2  CO3  CO4  CO of the:	Describe model protect modelation and digital pulse modelation rechniques.  Course "Object Oriented Programming"  Describe the principles of object oriented programming.  Describe the principles of object oriented programming.  Apply the compets of date encapsulation, interface to 1c++.  Understand basic recognic contents in Principles of object oriented programming.  Apply the compets of classes, methods and inheritance to 1c++.  Understand basic recognic constructs in Principles of object oriented programs in Principles or object oriented programs in Principles oriented programs.  Understand basic recognic in Principles or object oriented programs in Principles oriented programs in Principles oriented programs.  Course "Integrated Circuits"  Introduce basic building blocks of an operational Amplifier and identify closed loop configurations of an op-amp.  Analyse, Design and Implement linear and non-linear applications of an op-amp.  Analyse, Design and Implements and Principles oriented and Demonstruct orients converted in the course of Oscillator.  Course "Advanced Principles of PLL to different applications and to memorize the concept of Oscillator.  Course "Advanced Principles or ARM International and International Internat
CO6  CO of the:  CO1  CO2  CO3  CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO4  CO of the:  CO1  CO2  CO3  CO4  CO5  CO4  CO5  CO5  CO5  CO5  CO5	Describe model printed Programming."  Describe the printiples of object sciented rougnaming.  Apply the concept of date encapation in cheritance in C++  Education thesis program contracts in Irvs.  Education and interface to vivin program in Irvs.  Education and such deconcepts and interface to vivin program in Irvs.  Education and such deconcepts and interface to vivin program in Irvs.  Education and such deconcepts and interface to vivin program in Irvs.  Education and such deconcepts and interface to vivin program in Irvs.  Education and such deconcepts and interface to vivin program in Irvs.  Education and such deconcepts and interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to an interface to vivin program in Irvs.  Education and interface to vivin program
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CO   of the	Describe of mediatric and digital pulse modulation rechaines.  Course "Object Oriented Programming"  Describe the principles of object oriented programming.  Apply the concept of date encapatalism, infortunce in C++.  Claderantal basic recognition, infortunce in C++.  Claderantal basic recognition of object oriented programming.  Apply the concept of date encapatalism, infortunce in C++.  Claderantal basic recognition of date encapatalism, infortunce in C++.  Claderantal basic recognition of date encapatalism, infortunce in C++.  Claderantal basic recognition of date encapatalism, infortunce in C++.  Claderantal basic recognition of date encapatalism, infortunce in C++.  Claderantal basic recognition of date encapatalism, infortunce in C++.  Claderantal basic recognition of date encapatalism, infortunce in C++.  Claderantal basic recognition of an operational Amplifier and identify closed loop configurations of an operational Amplifier and identify closed loop configurations of an operational Amplifier and identify closed loop configurations of an operational Amplifier and identify closed loop configurations of an operational Amplifier and identify closed loop configurations of an operational Amplifier and identify closed loop configurations of an operational Amplifier and identify closed loop configurations of an operational Dentification of the configuration of an operational Amplifier and identify closed loop configurations of an operational Dentification of the International Dentification of the Configuration of an operational Dentification of the International Dentification of the Configuration of the Object of the International Dentification of the International Dentification of the International
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CO   of the	Describe making under modulation and digital pulse modulation techniques.  Course "Object Oriented Programming"  Describe the principles of object oriented programming.  Describe the principles of object oriented programming.  Describe the principles of object oriented programming.  Understand basic recognition contents in Principles of the principles of object oriented programming.  Understand basic recognition countries in Principles of the principles of object oriented program in Principles of the principles of object oriented program in Principles of the princ
COS   OF the	Describe the first price of Programming.*  Describe the principles of oblest oriented Programming.  Describe the principles of oblest oriented programming.  Apply the concept of all encoqualation, infortance in C++.  Claderatual basis recogn constructs in Java Andre ble concept of all encoqualation, infortance in C++.  Claderatual basis recogn constructs in Java Andre ble concept of all encoqualation, infortance in C++.  Claderatual basis recogn constructs in Java Andre ble concept of all encoqualation, infortance to write programs Java.  Describe and use the concept and interfaces to unite programs Java.  Course "Integrated Circuits"  Littroduce basis building blocks of an operational Amplifier and identify closed loop; configurations of an op-sum.  Analyse, Design and Implement literar and one literar applications of an op-sum.  Analyse, Design and Implement literar and one literar applications of an op-sum.  Analyse, Design and Implement literar and one literar applications of an op-sum.  Analyse, Design and Emplement literar and one literar applications of an op-sum.  Analyse, Design and Emplement literar and one literar applications of an op-sum.  Analyse, Design and Emplement literar and one literar applications of an op-sum.  Analyse, Design and Emplement literar and one literar applications of an op-sum.  Analyse, Design and Emplement literar and its feature.  Fourth of ARM microprocessor architectures and its feature.  Describe the ARM microprocessor architectures and its feature.  Describe the ARM microprocessor architectures and its feature.  Describe the Armster of Processor and reconnective the spale processing applications.  Course: "System Programming and Operating Systems.  Course: "System Programming and Operating Systems.  Described the Armster of Management thoughts, still for understanding the conceptual frame work of Management as a discipline.  Course: "System Programming and Operating Systems including analysis of impact of finance factors.  Resource "System Programming and Operating Syst
CO	Describe for Points Oriented Programming"  Describe the principles of object criented programming.  Describe the principles of object criented programming.  Apply the concept of discuss exceptabilities, infertance in C++.  Understand being recognized control in Jeros.  Life principles of object criented programming.  Apply the concept of discuss, surchook and inferting to in C++.  Understand being recognized control in Jeros.  Life principles of a street in Jeros.  Life principles of the control in Jeros.  Life principles of Circuits of the Control in Jeros.  Life principles of Circuits of the Control in Jeros.  Life principles of Life principles of the Control in Jeros.  Life principles of Life principles of the Control in Jeros.  Life principles of Life principles of Life principles of the Control in Jeros.  Life principles of Life pr
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CO	Describe for Points Oriented Programming"  Describe the principles of object criented programming.  Describe the principles of object criented programming.  Apply the concept of discuss exceptabilities, infertance in C++.  Understand being recognized control in Jeros.  Life principles of object criented programming.  Apply the concept of discuss, surchook and inferting to in C++.  Understand being recognized control in Jeros.  Life principles of a street in Jeros.  Life principles of the control in Jeros.  Life principles of Circuits of the Control in Jeros.  Life principles of Circuits of the Control in Jeros.  Life principles of Life principles of the Control in Jeros.  Life principles of Life principles of the Control in Jeros.  Life principles of Life principles of Life principles of the Control in Jeros.  Life principles of Life pr
COS	Describe Oriented Programming*  Describe Oriented Or

CO of the	Course " Information Theory and Coding "
CO1	Infer source coding theorem, employ source coding techniques in data compression and evaluate entropy, loss of information in channel.
CO2	Define channel capacity, identify error correcting and detecting capabilities and perform error correction using different block codes.
CO3	Describe Galois field and related basics, explain and evaluate cyclic codes and design encoder-decoder circuit.
	Design multiple error correcting codes such as, BCH and RS, explain error control coding techniques and Construct Convolutional codes.
CO5	Understand and apply fundamental principles of data communication and networking.
CO6	Describe and analyze the hardware, software, components of a network and the interrelations. Apply flow and error control techniques in communication networks.
CO of the	Course "Mobile communication"
CO or the	OUL AUDIN COMMUNATION
COI	Explain and apply the concepts telecommunication switching, traffic and networks.
CO2	Analyze the telecommunication traffic.
CO3	Analyze radio channel and cellular capacity.
CO4	Explain and apply concepts of GSM and CDMA system.
CO of the	Course "Broad Band communication"
	Identify & analyze optical components used for system component design.
	Estimate and analyze various parameters of optical fiber to solve complex engineering problems.
CO3	Select appropriate multichannel system for efficient communication and problem statement design.
	Hearity and analyze various launching techniques and orbital mechanisms to get communication system as per engineering norms.  Hearity various statusching techniques and orbital mechanisms to get communication system as per engineering norms.
	usenity urious saseius satellite finishisme to meet use socio-electrometration.  Design and analysis satellite statistics from the socio-electrometration.
COU	Design and address Saletine tilk for sustainable Saletine Controller and the
CO of the	Course "Soft Computing"
COI	Lise a new tool /hooks to solve a wide variety of real world problems
CO2	Find an alternate solution, which may offer more adaptability, resilience and optimization
CO3	Apply the knowledge of Neural Network to research Problems
CO4	Apply the knowledge of Fuzzy Logic for the simplification of system design problems
	Gain knowledge of soft computing domain which opens up a whole new career option.
CO6	Tackle real world research problems
co	
CO of the	Course "Wireless Networks"
COI	Keep himself updated on latest wireless technologies and trends in the communication field.
CO2	Neety interest updates on the vives and data throughes and versus true continuous in resp.  Understand the universal versus and data throughes and versus true continuous in resp.  Understand the vives and data throughes and versus true continuous true.
CO3	Concession the narchitectures of vocation access tensions in work and the concession of the narchitectures of
CO4	Understand various protocols and services provided by next generation networks
Departme	nt of Computer Engineering
Semester -	1
CO of the	Course "Discrete Mathematics"
CO1	Histatac concept of set theory, proposition & multernatical induction.  Discuss the basic concept sos expected with relation, functions and their applications.  Discuss the basic concepts associated with relation, functions and their applications.
CO2	
CO3	Explaining possible outcomes of elementary combinatorial processes such as permutation and combination and calculating the probabilities.
CO3 CO4	Explaining possible outcomes of elementary combinatorial processes such as permutation and combination and calculating the probabilities.  Explain concept in graph theory & apply algorithm to solve various multernatical problems.
CO3 CO4 CO5	Explaining possible outcomes of dementary combinatorial processes such as permatation and combination and calculating the probabilities.  Explain concept in graph theory Campivy algorithm to solve various mathematical problems.  Illustrate basic terminology in trees & payly algorithm to find mismum quanting tree.
CO3 CO4	Explaining possible outcomes of elementary combinatorial processes such as permutation and combination and calculating the probabilities.  Explain concept in graph theory & apply algorithm to solve various multernatical problems.
CO3 CO4 CO5 CO6	Explaining possible outcomes of dementary combinatorial processes such as permatation and combination and calculating the probabilities.  Explain concept in graph theory Campivy algorithm to solve various mathematical problems.  Illustrate basic terminology in trees & payly algorithm to find mismum quanting tree.
CO3 CO4 CO5 CO6	Explaining possible outcomes of elementary combinatorial processes such as permatation and combination and calculating the probabilities.  Earlain concept in zerach theory Agopty algorithm to solve various mathematical problems.  Buthattate basic terminology in tene 8. Agopty algorithm to final minimum spanning tree.  To identify and prove the prospective of groups and rings.
CO3 CO4 CO5 CO6 CO of the	Explaining possible outcomes of dementary combinatorial processes such as permatation and combinations and calculating the probabilities.  Establica concept in again theory. Agaphy alapatitum to solve various manufacturial profession.  Blustane basic terminology in trees. A apply alapatitum to solve various manufacturial process.  To identify and proceed progenities of groups and rispo.  Course "Brighat Electronics and Logic Design"  Realize and simplify Bodeon Alaphraic assignments for designing datied circuits using K.Maps.
CO3 CO4 CO5 CO6 CO of the	Explaining possible outcomes of elementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in another hore, Nagarily authorities not be carrier undermarked an observable process.  Balatica thesis terminology in trees. & apply alporitims to find minimum synaming tree.  To identify and prove the properties of groups and rings.  Course "Brightal Exertencies and Logic Design"  Redize and simplify Boolean Alcebraic assistements for designing digital circuits using K-Maps.  Design and implement Sequential and Combinational digital circuits using K-Maps.
CO3 CO4 CO5 CO6 CO of the	Explaining possible outcomes of dementary confinantial processes such as permatation and combination and calculating the probabilities.  Education concept in again them on Agaphy alarmiton to solve usions insulation and solve terminology in tree. A apply algorithms to find minimum spanning tree.  To identify and prove the properties of groups and rises.  Course "Digital Electronics and Lugic Design"  Realize and simplify Boolean Algorities as entirements for designing digital circuits using K-Mage.  Design and implement Sequential and Combinational digital circuits as per the specifications.  Apply the knowledges to appropriate K-Re to appropr
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4	Explaining possible outcomes of elementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in another hore, Acaptyl suptimities to obe curious mathematical problems.  Balatica to the interest theory in trees. & apply alporithms to find minimum synaming tree.  To identify and prove the properties of groups and rings.  Course "Digital Electronics and Logic Design"  Realize and simplify Boolean Alcebraic assistements for designing digital circuits using K Magn.  Design and implement Sequential and Combinational digital circuits using K Magn.  Apply the knowledge to appropriate K as per the design specifications.
CO3 CO4 CO5 CO6 CO of the	Explaining possible outcomes of dementary confinantial processes such as permatation and combination and calculating the probabilities.  Education concept in again them on Agaphy alarmiton to solve usions insulation and solve terminology in tree. A apply algorithms to find minimum spanning tree.  To identify and prove the properties of groups and rises.  Course "Digital Electronics and Lugic Design"  Realize and simplify Boolean Algorities as entirements for designing digital circuits using K-Mage.  Design and implement Sequential and Combinational digital circuits as per the specifications.  Apply the knowledges to appropriate K-Re to appropr
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5	Esplaining possible outcomes of elementary combinatorial processes such as permatation and calculating the probabilities.  Balatica concept in another hore, Sacapity alumination solve seriors manufactural problems.  Balatica concept in another box, Pagety alumination solve seriors manufactural problems.  Balatica concept in serior, Sappty algorithms to find minimum spanning tree.  To identify and prove the properties of groups and rings.  Course "Brightal Exertransic and Legic Design"  Realize and simplify Boolean Algebraic assignments for designing digital circuits using K-Mage.  Design and implement Sequential and Combinational digital circuits using K-Mage.  Design and further the confedent to appropriate K' as per the design specifications.  Design significantly activems using YMBA.  Develop simple embedded system for simple real world application.
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5	Explaining possible outcomes of elementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in another hore, Acaptyl suptimities to obe curious mathematical problems.  Balatica to the interest theory in trees. & apply alporithms to find minimum synaming tree.  To identify and prove the properties of groups and rings.  Course "Digital Electronics and Logic Design"  Realize and simplify Boolean Alcebraic assistements for designing digital circuits using K Magn.  Design and implement Sequential and Combinational digital circuits using K Magn.  Apply the knowledge to appropriate K as per the design specifications.
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5	Esplaining possible outcomes of dementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in another hore, Anapyl sulmitten toole works manufactural processes.  Balatica concert in another theory, Anapyl sulmitten toole works manufactural processes.  To identify and prove the properties of prospa and irrags.  Course "Bright Electronics and Logic Design"  Realize and simpetify Boolean Algebraic assignments for designing digital circuits using K.Mage.  Design and implement Sequential and Combinational digital circuits using K.Mage.  Design and implement Sequential and Combinational digital circuits using K.Mage.  Design simple digital vetters using K.Mag.  Design simple digital vetters using V.Mag.
CO3 CO4 CO5 CO6 CO of the CO2 CO3 CO4 CO5 CO6 COCO2 COCO5 CO	Esplaining possible outcomes of dementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in another here. Apply algorithm to find minimum spanning tree.  To identify and prove the properties of prosps and trags.  Course "Bright Electronics and Logic Design"  Realize and simperify Boolean Alechraic assignments for designing digital circuits using K-Maps.  Desputing the Noveledge to appropriate if an open administration of the properties of prosps and implements for designing digital circuits using K-Maps.  Desputing and implement Sequential and Combinational digital circuits using K-Maps.  Despite and implement Sequential and Combinational digital circuits using K-Maps.  Despite simple digital versions using VIM.  Develop an implement process on the properties of the simple calculation of simple real world application.  Course "Data Structures and Algorithms"  To discriminate the usage of various substructure in approaching the problems solution.
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO of the CO1 CO5 CO of the CO1 CO1 CO2 CO3 CO3 CO3 CO3 CO3 CO3 CO3 CO3	Explaining possible outcomes of dementary confinantial processes such as permatation and combination and calculating the probabilities.  Blastican councing in again them on Superiorities and the processes of th
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO of the CO1 CO5 CO of the CO1 CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5	Esplaining possible outcomes of elementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in agriculture to such such materials of problems.  Balatica concert in agriculture of programs after in the materials of problems.  To identify and prove the proporties of prougs and trips.  Concert "Digital Externation and Logic Design"  Realize and simplify Boolean Algebraic assignments for designing digital circuits using K Maps.  Design and implement Sequential and Confiniational digital circuits using K Maps.  Design and implement Sequential and Confiniational digital circuits using K Maps.  Design simple embodied to appreciate K as per the design specifications.  Design simple embodied to appreciate K as per the design specifications.  Design simple embodied system using V Map.  Devices "upto embodied system sing V Map of supplementary of the supplementary of
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO of the CO1 CO5 CO of the CO1 CO1 CO2 CO3 CO3 CO3 CO3 CO3 CO3 CO3 CO3	Explaining possible outcomes of dementary confinantial processes such as permatation and combination and calculating the probabilities.  Blastican councing in again them on Superiorities and the processes of th
CO3 CO4 CO5 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO of the CO1 CO5 CO of the CO1 CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5	Esplaining possible outcomes of elementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in agriculture to such such materials of problems.  Balatica concert in agriculture of programs after in the materials of problems.  To identify and prove the proporties of prougs and trips.  Concert "Digital Externation and Logic Design"  Realize and simplify Boolean Algebraic assignments for designing digital circuits using K Maps.  Design and implement Sequential and Confiniational digital circuits using K Maps.  Design and implement Sequential and Confiniational digital circuits using K Maps.  Design simple embodied to appreciate K as per the design specifications.  Design simple embodied to appreciate K as per the design specifications.  Design simple embodied system using V Map.  Devices "upto embodied system sing V Map of supplementary of the supplementary of
CO3 CO4 CO5 CO6 CO of the: CO1 CO2 CO3 CO4 CO5 CO4 CO5 CO of the:	Explaining possible outcomes of dementary confinancial processes such as permatation and contributions and calculating the probabilities.  Blastican counter in graph them of Agraphy admitten so the various materials and extension.  Blastican beautiful processes and apply algorithms to find minimum spanning tree.  Connec "Digital Exectancias and Logic Design"  Realize and simpliful Boolean Alcobraic assistances. For designing digital circuits using K.Maps.  Design and implifue Boolean Alcobraic assistances. For designing digital circuits using K.Maps.  Design and implifue Boolean Alcobraic assistances. For designing digital circuits using K.Maps.  Design and implifue Boolean Alcobraic assistances. For designing digital circuits using K.Maps.  Design and implifue Boolean Alcobraic assistances. For designing digital circuits using K.Maps.  Design and implifue to propergist R. Ex set the design septifications.  Design simple digital systems using VIDI.  Design simple digital systems using VIDI.  Design simple digital systems using VIDI.  To discontinuate the usage of various structures in approaching the problem solution.  To discontinuate the usage of various structures in approaching the problem solution.  To discontinuate the usage of various structures in approaching the problem solution.  To discontinuate the sage affects data structures in approaching the problem solution is a strategy for better efficiency.
CO3 CO4 CO5 CO6 CO of the: CO1 CO2 CO3 CO4 CO5 CO4 CO5 CO of the:	Esplaining possible outcomes of elementary combinatorial processes such as permatation and combination and calculating the probabilities.  Balatica concert in agriculture to such such materials of problems.  Balatica concert in agriculture of programs after in the materials of problems.  To identify and prove the proporties of prougs and trips.  Concert "Digital Externation and Logic Design"  Realize and simplify Boolean Algebraic assignments for designing digital circuits using K Maps.  Design and implement Sequential and Confiniational digital circuits using K Maps.  Design and implement Sequential and Confiniational digital circuits using K Maps.  Design simple embodied to appreciate K as per the design specifications.  Design simple embodied to appreciate K as per the design specifications.  Design simple embodied system using V Map.  Devices "upto embodied system sing V Map of supplementary of the supplementary of
CO3 CO4 CO of the CO of the CO2 CO5 CO5 CO4 CO2 CO5 CO4 CO5 CO1 CO2 CO3 CO4 CO5 CO6 CO7	Explaining possible outcomes of dementary confinancial processes such as permatation and combination and calculating the probabilities.  Blastican concert in again them on Sapa Again partition to solve usions unabmentated a problems.  Blastican basic terminology in trees. A apply algorithms to find minimum spanning tree.  Concert "Digital Electronics and Lagolit Design"  Realize and simplify Boolean Algorities are streements for designing digital circuits using K Maps.  Design and implicite the compensation of a section and combinational digital circuits using K Maps.  Design and implicite the compensation of the design negligital of circuits as per the specifications.  Analysis digital systems using VIDI.  Design and implicite to appreciate fix as the design negligital circuits using K Maps.  Design and implicite to appreciate fix as the design negligital circuits using K Maps.  Design and implicite to appreciate fix as the design negligital circuits using K Maps.  Design and implicite to appreciate fix as the design negligital circuits as per the specifications.  Design analysis digital systems using VIDI.  Design and problems of Aggretitums*  To discriminate the usage of various structures in approaching the problems solution.  To discriminate the usage of various structures in approaching the problems solution to appreciate discriminate design problems to apply studied algorithm and data structure.  To discriminate the transport of the programming problems.  To assume the problems to apply studied algorithm and data structure.  To assume the problems to apply studied algorithm and data structure.  To assume the problems to apply studied algorithm and data structure.  To assume the problems to apply studied algorithm and data structure.
CO3 CO4 CO5 CO6 CO of the CO2 CO2 CO3 CO4 CO5 CO of the CO5 CO of the CO5 CO of the CO5 CO1 CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5 CO5 CO1 CO2 CO3 CO4 CO5	Esplaining possible outcomes of dementary confinancial processes such as permatation and conbination and calculating the probabilities.  Bullatian concert in agriculture to solve vision mathematical problems.  Bullatian basis terminology in times. & apply algorithms to find minimum spanning tree.  To identify and process the properties of groups and rings.  Course "Bright Electronics and Logic Design"  Course "Bright Electronics Separation of Confinancia and Bright Circuits using K Maps.  Design and implement Separation of Confinancia and Bright Circuits as per the specifications.  Course "Data Structures and Algorithms"  To discriminate the usage of various structures in approaching the problem solution.  To design the designation to solve the prosputning problems.  To analyze the problem to solve the prosputning problems.  To analyze the problem to solve the prosputning and structures.  To analyze the problem to solve the prosputning and structures.  Course "Computer Organization and Architecture"  Course "Computer Organization and Architecture"  Demonstrate computer architecture concepts related to design of modem processors, memories and Ordine the structure, function and advantancies of Computer oystem
CO3 CO4 CO5 CO6 CO of the CO of the CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5 CO4 CO5 CO5 CO4 CO5 CO4 CO5	Explaining possible outcomes of dementary confinancial processes such as permatation and combination and calculating the probabilities.  Blastian concept in again them on Supervision for financianum spanning tree.  To identific and proceed the procept in of groups and rise.  Course "Digital Electronics and Legic Design"  Realize and simplify Boolean Algebraic assignments for designing digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Combinational digital circuits using K Maps.  Design and implement Sequential and Architecture in agrowability of the design and combinational digital circuits using K Maps.  To discinimate the usage of urious structures in agrowability design and under the design and and structure.  To discinimate the usage of urious structures in agrowability design and under the design and an architecture of the programming problems.  To discinimate the usage of urious structures in agrowability design and under the design and an architecture of the programming problems.  To discinimate the usage of urious structures in agrowabiling the problems solution and an architecture of the programming
CO3 CO4 CO5 CO6 CO of the CO2 CO2 CO3 CO4 CO5 CO of the CO5 CO of the CO5 CO of the CO5 CO1 CO2 CO3 CO4 CO5 CO1 CO2 CO3 CO4 CO5 CO5 CO1 CO2 CO3 CO4 CO5	Esplaining possible outcomes of dementary confinancial processes such as permatation and conbination and calculating the probabilities.  Bullatian concert in agriculture to solve vision mathematical problems.  Bullatian basis terminology in times. & apply algorithms to find minimum spanning tree.  To identify and process the properties of groups and rings.  Course "Bright Electronics and Logic Design"  Course "Bright Electronics Separation of Confinancia and Bright Circuits using K Maps.  Design and implement Separation of Confinancia and Bright Circuits as per the specifications.  Course "Data Structures and Algorithms"  To discriminate the usage of various structures in approaching the problem solution.  To design the designation to solve the prosputning problems.  To analyze the problem to solve the prosputning problems.  To analyze the problem to solve the prosputning and structures.  To analyze the problem to solve the prosputning and structures.  Course "Computer Organization and Architecture"  Course "Computer Organization and Architecture"  Demonstrate computer architecture concepts related to design of modem processors, memories and Ordine the structure, function and advantancies of Computer oystem
CO3 CO4 CO5 CO6 CO of the CO2 CO3 CO4 CO5	Esplaining possible outcomes of dementary confinancial processes such as permatation and conhistation and calculating the probabilities.  Blantace basic transcribedper in trees. A apply algorithms to find minimum spanning tree.  To identify and prove the properties of groups and rises.  Course "Bright Electronics and Logic Design"  Realize and samplify Boolean Algorithms castignments for designing digital circuits using K Maps.  Design and inspection of the confinancial and digital circuits using K Maps.  Design and implement Sequential and Confinancial digital circuits using K Maps.  Design and implement Sequential and Confinancial digital circuits using K Maps.  Design and implement Sequential and Confinancial digital circuits using K Maps.  Design and proper embedded system for supply and an application.  Course "Data Structures and Algorithms"  To discriminate the usage of various structures in approaching the problem solution.  To see effective and efficient data structures in solving various Course Engineering domain problems.  To assign appropriate algorithms' arrange for better efficiency.  To see appropriate algorithms' arrange for better efficiency.  Course "Computer Organization and Architecture"  Demonstrate computer architecture concepts related to design of modern processors, memories and IOs and Outline the structure, function and advancements of least of position upones.
CO3 CO4 CO5 CO5 CO5 CO6 CO6 CO7	Espitain content in gradient book various of elementary confinancial processes such as permatation and combination and calculating the probabilities.  Blastica content in gradient book various obstantiant so volve usions make the processes of expiration to soft minimum spanning tree.  Blastica content in gradient being the processes of expiration to soft minimum spanning tree.  Corner "Digital Escritusius and Legic Design"  Realize and simplify Boolean Alcoholia estimates for designing digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude Sequential and Combinational digital circuits using K Mags.  Design and implicitude digital circuits using K Mags.  Design and implicitude digital circuits using K Mags.  Design and implicitude digital circuits using K Mags.  To design the digital circuits using K Mags.  To design th
CO3 CO4 CO5 CO5 CO5 CO6 CO6 CO7	Esplains concert in grab theore Kapp's algorithm to solve usions unbanation and combination and calculating the probabilities.  Blastica scentar in grab theore Kapp's algorithm to solve usions unbanational problems.  Blastica scentar in grab theore Kapp's algorithm to solve usions unbanational problems.  Corner "Digital Esternation and Lagorithm Corporation (in graph and in its).  Corner "Digital Esternation and Lagorithm Corporation (in graph and in its).  Realize and simplify Boolean Algorithm configuration (in state in the corporation of the corporation o
CO3 CO4 CO5 CO6 CO6 CO6 CO6 CO7	Esplain concept in agribb more Against automation and combination and combination and calculating the probabilities.  Blastian concept in agribb theory Against automation as observed in the progression of the progression o
CO3 CO4 CO5 CO6 CO6 CO of the CO1 CO2 CO3 CO4 CO5 CO of the CO5 CO of the CO2 CO3 CO4 CO5 CO5 CO of the CO5 CO of the CO5 CO5 CO of the CO5 CO of the CO5 CO of the CO5 CO5 CO6 CO5 CO6 CO7 CO5 CO7	Explaining possible noticenes of elementary confinancial processes such as permatation and combination and clocklating the probabilities.  Blastane basic terms and better Acapt's algorithms to solve usions insulation solve to stress interface and the processes of groups and rise.  Course "Brigat Electronics and Lagic Design"  Realize and simplify Bodon Algebraic assistments for designing datied circuits using K.Mago.  Design and impolement Sequential and Combinational datied circuits using K.Mago.  Design and impolement Sequential and Combinational datied circuits using K.Mago.  Design and impolement Sequential and Combinational datied circuits using K.Mago.  Design and impolement Sequential and Combinational datied circuits using K.Mago.  Design single district votems using V.HBAL.  Design single district votems using V.HBAL.  Design single district votems using V.HBAL.  Course "Data Structures and Algorithms"  To design the discretified by some for simple real world application.  To design the discretified the structure is approaching the problems solution.  To design the discretified the structure is nobing vortice Course Engineering domain problems.  To adjust the problems to use give structure is approaching the problems solution.  To adjust the problems to use give structure is approaching the problems solution.  To adjust the problems to use give structure is approaching the problems to using vision Course Engineering domain problems.  To adjust the problems to use give structure is approaching domain problems.  To adjust the problems us useful structure functions and adjustance in a problems.  To adjust the problems us useful structure, function and data successes.  To adjust the problems of the problems with a disputition in a problems.  To adjust the problems of the problems and adjust the interest of the problems is an adjust the interest of the problems and adjust to interest of the problems.  To adjust the adjust of adjust to interest of the problems and adjust to interest of the problems and adjus
CO3 CO4 CO5 CO5 CO6 CO of the	Esplain concept in agribb theoric Agarb distribution solve vision submitted in processes such as permatation and combination and calculating the probabilities.  Blastican concept in agribb theory Agarby distribution solve visions international professions.  Blastican bearing submitted theory of the process of agribbility of the proces
CO3 CO4 CO5 CO6 CO of the CO5	Explaining possible noticenes of elementary confinancial processes such as permatation and combinations and calculating the probabilities.  Blastane basic terms and there of Agaph' adjustition to find minimum spanning tree.  To identify and preve the processes of groups and rise.  Course "Brigat Exertunics and Lagic Design"  Realize and simplify Boolean Alzebraic assistments for destinating dated circuits using KMags.  Design and impolement Sequential and Combinational dated alcients as per the specifications.  Apply the Amorebed to specienciar Ex new feed design specifications.  Design and impolement Sequential and Combinational dated alcients as per the specifications.  Design and impolement Sequential and Combinational dated accounts as per the specifications.  Design and impolement Sequential and Combinational dated circuits as per the specifications.  Design and impolement Sequential and Combinational dated accounts as per the specifications.  Design and impolement Sequential and Combinational dated accounts as per the specifications.  Design and impolement Sequential and Combinational dated accounts as per the specifications.  Design and impolement Sequential and Combinational dated accounts as per the specifications.  Design and impolement Sequential and Combinational dated accounts as per the specifications.  To design the date date statement in supposability that problems obtained a design sequential and accounts are approaching the problems to solve the proteomoral problems.  To adopt the problems to solve the foliation of solvential accounts and solvent
CO3 CO5 CO of the CO3 CO5	Espaisan concert in grab theory Karph's algorithm to solve usions unbentuation and combination and calculating the probabilities.  Blastane behave Karph's algorithm to solve usions unbentuated problems.  Blastane behave Karph's algorithm to solve usions unbentuated an oblems.  Blastane behave Karph's algorithm to solve usions unbentuated an oblems.  Corner "Digital Escritosians and Legic Design"  Realize and simplify Boolean Alcoholia estimates for designing digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design simple digital vistems using VMDs.  Design simple digital vistems using VMDs.  Design simple digital vistems using VMDs.  Corner "Data Structures and Algorithms"  To design the algorithms to oble the more analysis of the proportion in graph and an advantage of the proportion in advantage
CO3 CO4 CO5 CO6 CO of the CO7 CO of the CO7 CO of the CO7 CO of the CO7	Esplainin growthe noticenses of dementary confinancial processes such as permatation and combination and calculating the probabilities.  Bloation concert in again theory Agaphy algorithms to find minimum spanning tree.  Bloation concert in again theory and probabilities.  Bloation concert in again theory agaphy algorithms to find minimum spanning tree.  Concer-Digital Exertranics and Logic Design*  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Design angle digital votems using W.Had.  Design angle digital votems using treat level design specifications.  Course "Data Structures and Algoritims"  To design the degine them to whom the programming problems.  To design the deginethem to whom the programming problems.  To design the deginethem to whom the programming problems.  To adjust the problems to apply the problems with problems to apply the digital
CO3 CO4 CO5 CO6 CO of the CO7 CO of the CO7 CO of the CO7 CO of the CO7	Espaisan concert in grab theory Karph's algorithm to solve usions unbentuation and combination and calculating the probabilities.  Blastane behave Karph's algorithm to solve usions unbentuated problems.  Blastane behave Karph's algorithm to solve usions unbentuated an oblems.  Blastane behave Karph's algorithm to solve usions unbentuated an oblems.  Corner "Digital Escritosians and Legic Design"  Realize and simplify Boolean Alcoholia estimates for designing digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design and implement Sequential and Combinational digital circuits using KMaps.  Design simple digital vistems using VMDs.  Design simple digital vistems using VMDs.  Design simple digital vistems using VMDs.  Corner "Data Structures and Algorithms"  To design the algorithms to oble the more analysis of the proportion in graph and an advantage of the proportion in advantage
CO3 CO4 CO5 CO6 CO6 CO7	Esplains concert in agriculture south season and combination a
CO3 CO4 CO5 CO6 CO6 CO7	Esplainin growthe noticenses of dementary confinancial processes such as permatation and combination and calculating the probabilities.  Bloation concert in again theory Agaphy algorithms to find minimum spanning tree.  Bloation concert in again theory and probabilities.  Bloation concert in again theory agaphy algorithms to find minimum spanning tree.  Concer-Digital Exertranics and Logic Design*  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Bedien and simplify Boolean Algorities are summers for designing digital circuits using K.Mags.  Design angle digital votems using W.Had.  Design angle digital votems using treat level design specifications.  Course "Data Structures and Algoritims"  To design the degine them to whom the programming problems.  To design the deginethem to whom the programming problems.  To design the deginethem to whom the programming problems.  To adjust the problems to apply the problems with problems to apply the digital
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CO1	Identify structure of database system using data models and design E-R Model for given requirements and convert the same into database tables.
CO2	Describe database techniques such as SQL & PL/SQL.
CO3	Discuss relational model and database design.
CO4	Explain transaction Management in relational database System.
	Describe different database architecture and analyses the use of appropriate architecture in real time environment.
CO6	Use advanced database Programming concepts Big Data - HADOOP
CO of the	Course "Software Engineering and Project Management"
COl	Decide on a process model for a developing a software project
CO2	Classify software applications and Identify unique features of various domains
CO3	Design test cases of a software system.
CO4	Understand basics of IT Project management.
CO5	Plan, schedule and execute a project considering the risk management.
CO6	Apply quality attributes in software development life cycle.
CO of the	Course "Information Systems & Engineering Economics"
COI	
CO2	Understand the need, usage and importance of an Information System to an organization.
CO2	Understand the activities that are undertaken while managing, designing, planning, implementation, and deployment of computerized information system in an organization.
CO3	Further the student would be aware of various Information System solutions like ERP, CRM, Data warehouses and the issues in successful implementation of these technology solutions in any organizations
CO4	Outline the past history, present position and expected performance of a company engaged in engineering practice or in the computer industry.
CO5	Perform and evaluate present worth, future worth and annual worth analyses on one of more economic alternatives.
CO6	Be able to carry out and evaluate, benefit (cost, life cycle and breakeven analyses on one or more economic alternatives.
CO of the	Course "Computer Network"
COI	Analyze the requirements for a given organizational structure to select the most appropriate networking architecture, topologies, transmission mediums, and technologies
CO2	Demonstrate design issues, flow control and error control
CO3	Illustrate applications of Computer Network capabilities, selection and usage for various sectors of user community.
CO4	Demonstrate different routing and switching algorithms
CO5	Analyze data flow between TCP/IP model using Application, Transport and Network Layer Protocols.
CO6	Illustrate Client-Server architectures and prototypes by the means of correct standards and technology.
CO of the	Course "Design and Analysis of Algorithms"
CO1	Describe the problem solving principles, analyze the asymptotic performance of algorithms and apply recurrence relation, divide and conquer algorithmic design techniques.
CO2	Apply and analyze greedy and dynamic programming algorithmic design techniques.
CO4	Describe computability theory, randomized and approximation algorithms.
CO5	Describe and analyze the parallel and concurrent algorithms.
CO6	Explain the distributed, embedded, Internet of things and algorithms in software.
CO of the	Course "Principles of Modern Compiler Design"
COI	Explain basic concepts and issues of compiler design, Lexical analysis process and use the knowledge of LEX tool to design the scanner
CO2	Identify the role of parsing and semantic analysis in compiler design, distinguish between different types of parsers, and use YACC tool to design parser
CO3	Describe syntax directed translation and apply the knowledge to develop intermediate code for language constructs.
CO4	Explain and apply knowledge of code generation and code optimization techniques.
CO5	Summarize the concept of language specific compilation and functional languages.
CO6	Experiment compiler tools in basic, concurrent, distributed and embedded environments
	Experiment compiler tools in basic, concurrent, distributed and embedded environments  Course "Smart System Design and Applications"
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CO of the CO of	Describe fundamental concepts of All and define rational agent Consense the surious searching algorithms and agoly in gaser theory.  Blastene and opened to knowledge and explaint winning theologies. Consense and Analyse unious genebalitie models, and communite decision network.  Beachine learning techniques no embedded systems.  Beachine learning techniques no embedded systems.  Course "Electrics-E Data Mining Techniques and Applications"  Understand the basic concepts of Data mining Ability to implement concept of frequent patterns and use of Association Roles.  Analyses different methods of classification  Course "Electrics-E Data Mining Techniques and Applications"  Understand and basic concepts of Data mining Ability to implement concept of frequent patterns and use of Association Roles.  Analyses different methods of classification  Course "Electrics-E Data Mining Techniques and Applications"  Lord Various classification  Course "Electrics-E Language all bits data mining  Course "Electric-II Pervasive Companing"  To present a survey on pervasive computing building backs.  To accord "Electric-II Pervasive Companing"  And Computer Engineering.  It of Course ("Engineering Leaning and Backs)  And Computer Engineering.  It of Course ("Software Design Methodologies and Tectings"  To sudect and and poly software design methods.  To acclose and agoly definered orderine orders on the size processing models.  To understand and agoly software design methods.
CO of the CO of	Corner "Start Starten Design and Applications"  Describe fundamental concepts of Al and define carional agent Compane the various scarching adjustions and agent in game theore.  Blastate and represent the various scarching adjusting many devices generally and another the various scarching adjusting various planning echaiques Compane and Analyze various metabolistiv models and communitie decision network.  Describe various metinic learning techniques and develop near system application.  Relate mechanic learning techniques and Applications"  Understand the basic concepts of Data mining Allitotic implements oncept of freque patterns and use of Association Roles.  Analyses officerum methods of cleaning and develop many and according to the pattern of the pattern o
CO of the CO of	Describe fundamental concepts of All and define rational agent Consense the surious searching algorithms and agoly in gaser theory.  Blastene and opened to knowledge and explaint winning theologies. Consense and Analyse unious genebalitie models, and communite decision network.  Beachine learning techniques no embedded systems.  Beachine learning techniques no embedded systems.  Course "Electrics-E Data Mining Techniques and Applications"  Understand the basic concepts of Data mining Ability to implement concept of frequent patterns and use of Association Roles.  Analyses different methods of classification  Course "Electrics-E Data Mining Techniques and Applications"  Understand and basic concepts of Data mining Ability to implement concept of frequent patterns and use of Association Roles.  Analyses different methods of classification  Course "Electrics-E Data Mining Techniques and Applications"  Lord Various classification  Course "Electrics-E Language all bits data mining  Course "Electric-II Pervasive Companing"  To present a survey on pervasive computing building backs.  To accord "Electric-II Pervasive Companing"  And Computer Engineering.  It of Course ("Engineering Leaning and Backs)  And Computer Engineering.  It of Course ("Software Design Methodologies and Tectings"  To sudect and and poly software design methods.  To acclose and agoly definered orderine orders on the size processing models.  To understand and agoly software design methods.
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CO of the CO 201 CO2 CO3 CO4 CO5	Corear Shart Shaten Design and Applications"  Describe fundamental concepts of All and define rational agent Compose the surious searchine algorithms and agels in game theory.  Elementar and represent throughout and surprise probability models and summarize decision network.  Compose and Analyze unions probability models and summarize decision network.  Compose and Analyze unions probability models and summarize decision network.  Control Windows markine lorning rechniques and develops wart system applications.  Control "Electric-I. Data Mining Techniques and Applications"  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Destruction contents techniques and Applications "  Understand as development to concepts and Applications "  Destruction contents techniques and Applications "  Destruction contents techniques and Applications "  Destruction contents techniques and above mining  Destruction of the process of the mining and the min
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CO of the CO of	Describe fundamental concepte of Al and define rational agens Common for surious scarching algorithm and agels in anne theory.  Describe fundamental concepte of Al and define rational agens Common for surious scarching algorithm and agels in anne theory.  Electrical surious controlled and explaint urbon planning techniques Common and Analyses urious probability models and summarize decision network.  Electrical surious and Analyses urious probability models and summarize decision network.  Electrical surious controlled and explaint urbon planning decision network.  Electrical surious interference is non-blocked and summarize decision network.  Electrical substitution in the busic concepts of Data mining Course "Electrical: Data Mining Techniques and Applications"  Electrical: Data Mining Techniques and Applications'  Electrical: Data Mining
CO of the CO of	Corear Shart Shaten Design and Applications"  Describe fundamental concepts of All and define rational agent Compose the surious searchine algorithms and agels in game theory.  Elementar and represent throughout and surprise probability models and summarize decision network.  Compose and Analyze unions probability models and summarize decision network.  Compose and Analyze unions probability models and summarize decision network.  Control Windows markine lorning rechniques and develops wart system applications.  Control "Electric-I. Data Mining Techniques and Applications"  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Understand the basic concepts of Data mining  Mining Techniques and Applications "  Destruction contents techniques and Applications "  Understand as development to concepts and Applications "  Destruction contents techniques and Applications "  Destruction contents techniques and Applications "  Destruction contents techniques and above mining  Destruction of the process of the mining and the min

	Critical understanding of basic characteristics, components and policies of information security.
CO2	Analyze and select the appropriate encryption technique and security standard for addressing the problems.
CO3 CO4	Analyze public key cryptography, key management to design and implement authentication services Alels to analyze advanced security requirements, sissues and technologies  Alels to analyze advanced security requirements, sissues and technologies
CO5	Anse to analyze advanicous centrity regulareteness, issues and termonogies  Master the characteristic of intrinsic direction system and friewald tools.
CO6	The familiar with network security with the perspective of Hacking and countermeasures  Familiar with network security with the perspective of Hacking and countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with network security with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and Countermeasures  The familiar with the perspective of Hacking and
CO of the	Course "Business Analytic and Intelligence"
COI	Blustrate the technical concepts of Business Intelligence & the role of muthematical model in it.
CO2 CO3	Demonstrate Concepts, methodologies and technologies behind DSS Summarize the model & technologies Orbat Warehouse
CO3	Summarze the model & technologies dod bela waterboose Analyze, Design the Data Analyzies of Data Waterboose Analyze, Design the Data Analyzies of Data Waterboose Analyze, Design the Data Analyzies of Data Waterboose
CO5	Zianaya, za Kisjana iza Zianayana sinuti etiki suniya zi
	Design with Consequence of Tools for Business Analytics & Intelligence with applications indifferent domain
CO of the	Course "Design & Analysis of Algorithms"
COI	Understand the fundamentals of algorithm designs.
CO2 CO3	Solve a problem using an algorithm and evaluate its correctness
	Describe, apply and analyze the complexity of certain divide and conquer, preedy, and dynamic programming, backtracking and branch and bound algorithm techniques to solve problems Develop Understand the concepts of time and space complexity, worst case, average case and best case complexities
CO5	Analyze the asymptotic performance of algorithms.
CO6	Describe the classes P, NP, and NP-Complete and be able to prove that a certain problem is NP-Complete.
CO7	Understand analysis techniques such as amortized analysis, probabilistic analysis, randomness and Minimax or Maximin optimality.
CO8	Identify and analyze criteria and specifications appropriate to new problems, and choose the appropriate algorithmic design technique for their solution.
CO of the	Course "Systems Programming & Operating System"
COI	Analyze and synthesize of assembler
CO2	Analyze and synthesize macro Processor
CO3	Use tools like LEX & YACC.
CO4	Implement operating system functions
CO5	Implement memory management functions of OS.
CO6	Implement I/O management functions of OS.
CO of the	Course "Embedded Systems & Internet of Things"
COurtie	COLOR LONGUE VINCOL W. HOUSE
COI	Understand the basic concepts of Embedded System and IOT
	Choose different design methodologies for embedded IoT
CO3	Implement an architectural design for IoT for specified requirements
CO4	Classify various IoT protocols and different security models.
CO5	Compare Web of Things and Cloud of Things
CO6	Choose between available technologies and devices for stated IoT challenge
CO of the	Course "Software Modeling and Design "
COI	To analyze the problem statement (SRS) and choose proper design technique for designing web-based or desktop application
	To design and analyze an application using UML modeling as fundamental tool.
CO3	To apply design patterns to understand reusability in OO design
CO4 CO5	To decide, and apply appropriate modern tool for designing and modeling. To decide and apply appropriate modern tool for designing and modeling. To decide and and and watercontain emodern testin tool for testing web-based or decktoo areolication.
CO4 CO5	to secue and approxyment mozern toos for designing and mocentic.  To decide and apply appropriate modern testing tool for testing web-based or desktop application.
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CO5	To decide and apply appropriate modern testing tool for testing web-based or desktop application.  Course "Web Technology."
CO of the	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "Web Technology"  To understand web and technologies that makes the web pages.
CO of the	To decide and apply appropriate modern testing web based or desktop application.  Course "Wh Technology"  To understand the test software for the testing web based or desktop application.  To understand the test software for the testing web to the testing web te
CO of the CO1 CO2 CO3	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "Web Technology"  To understand web and technologies that makes the web pages.  To understand the use of Insofering and JOherry  To learn the Insultation of Tomast Forew and execution of programs on sever side.
CO of the	To decide and apply appropriate modern testing web based or desktop application.  Course "Wh Technology"  To understand the test software for the testing web based or desktop application.  To understand the test software for the testing web to the testing web te
CO5  CO of the CO1  CO2  CO3  CO4  CO5	To decide and apply appropriate modern testing web based or desktop application.  Course "Wh Technology"  To understand the testing the throughous that makes the web pages.  To understand the use of Producing and Others  To learn the lessabilition of Tomas Green and execution of programs on server side.  Analyze given assign to obest testing the development and execution of programs on server side.
CO5 CO of the CO1 CO2 CO3 CO4 CO5 CO6	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "Web Technology"  To understand web and technologies that makes the web pages.  To understand the use of Inscisering and Speery  To learn the Institution of Tomast Server and execution of programs on server side.  Analyze given assignment to select southinable web development design methodology.  Decelog web based application using studies deem steel even between the services and content management.
CO5 CO of the CO1 CO2 CO3 CO4 CO5 CO6	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "Web Technology"  To understand web and technologies that makes the web pages.  To understand the use of Insofering and JOhery  To learn the Insultation of Tomas Green and exception of programs on sever side.  Analyze given assignment to select sustainable web development design methodology.  Declaye who bend efficient in usual taulies design the web development design methodology.
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO6  CO of the CO5	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "Web Technology"  To understand web and technologies that makes the web pages.  To understand web and technologies that makes the web pages.  To understand the use of Inscisering and Speery  To learn the Institution of Tomast Server and execution of programs on server side.  Analyze given assignment to select southinable web development design methodology.  Declegica web based application using unitable dient side and servers side web technologies.  Declegica with based application using unitable dient side and servers side web technologies.  Declegica with based application using unitable dient side and servers side web technologies.  Declegica with the application using unitable client side and servers side web technologies.  Declegica with the application using unitable client side and servers side web technologies.  Declegica with the application using unitable client side and servers side web technologies.  Declegica with the application using unitable client side and servers side web technologies.  Declegica with the application using unitable client side and servers side web technologies.
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO6  CO of the CO5  CO of the CO1	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "White Technology"  To understand we have the chandleges that makes the web pages.  To understand the set of makesing and Duers  To learn the installation of Tomac Forer and course of programs on server side.  Advance yet has suitant to velect sustainable except of programs on server side.  Analyzes given assignment to velect sustainable except of programs on server side.  Prochep solution to complex problem using quitable client side and server side web technologies.  Develop we blanct or possible problem using quitable client side and server side web vertices and content management.  Course "Engineering Mathematics III"  Apply knowledge of higher order linear differential equations to LCR circuits.
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO6  CO of the CO5	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "Web Technology"  To understand web and technologies that makes the web pages.  To understand web and technologies that makes the web pages.  To understand the new of Inscheding and Opera.  To the International To Tomast Server and execution of programs on server side.  Analyze given assignment to defect unstainable web development design methodologies.  Develop with based application using unitable (left size due afterwards web technologies  Develop value based guidelication using unitable (left size due afterwards web technologies)  Develop value based guidelication using unitable (left size due afterwards web technologies)  Develop value based guidelication using unitable (left size due afterwards web technologies)  Develop value based guidelication using unitable (left size due afterwards web technologies)  Develop value based guidelication using unitable (left size due afterwards web technologies)  Apply knowledge of higher order linear differential equations to LCR circuits.
CO5  CO of the CO1  CO2  CO3  CO4  CO5  CO6  CO of the CO1  CO2  CO of the CO1  CO2	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "White Technology"  To understand we have the chandleges that makes the web pages.  To understand the set of makesing and Duers  To learn the installation of Tomac Forer and course of programs on server side.  Advance yet has suitant to velect sustainable except of programs on server side.  Analyzes given assignment to velect sustainable except of programs on server side.  Prochep solution to complex problem using quitable client side and server side web technologies.  Develop we blanct or possible problem using quitable client side and server side web vertices and content management.  Course "Engineering Mathematics III"  Apply knowledge of higher order linear differential equations to LCR circuits.
CO5  CO of the cost of the cos	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "White Technology"  To understand the set of makeing and the throologies that makes the web pages.  To understand the set of makeing and the form of makeing and form of programs on severe side.  Analyze given assignment to elect statistical execution of programs on severe side.  Analyze given assignment to elect statistical execution of programs on severe side.  Analyze given assignment to elect statistical execution of ground and severe and severe in electrodopics.  Develop we blasted resplication using quitable client side and severe side severe is electrodopics.  Course "Engineering Mathematics III"  Apply knowledge of higher order linear differential equations to ICR circuits.  Solve modelum related to Frontir transform, Z-Transform and applications to Siral and Hunge processing.
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO4  CO5  CO5  CO5  CO5  CO6  CO7  CO7  CO7  CO7  CO7  CO7  CO7	To decide and apply appropriate modern testing tool for testing web based or desktop applications.  Course "Web Technology"  To understand web and technologies that makes the web pages.  To understand web and technologies that makes the web pages.  To understand the new of Juscicient and Opera.  To understand the new of Juscicient and Opera.  To the fine Intelligation of Toronic Ferrer and execution of programs on server side.  Analyze given assignment to select sustainable web development design methodology.  Decloped used based application using satisface feel state and server side web technologies.  Declop understand application using satisface feel state and server side web technologies.  Declop unbelland understand the state and server side web technologies.  Declop understand application using satisface feel state and server side web technologies.  Declop unbelland understand the state and server side web technologies.  Declop understand the state and server side state and server side web technologies.  Apply knowledge of ligher order linear differential equations to LTR circuits.  Solve problem tested to Fourier transferry. Transferr and applications to Signal and Image processing.  Apply probability theory for Estimation, predication analysis, Carve Fitting for analysis to extract information from research data and data of applied to machine intelligence.  Apply probability theory for Estimation, predication and decision making to the real time data
CO5  CO of the cost of the cos	To decide and apply appropriate modern testing tool for testing web based or desktop application.  Course "Whit Technology"  To understand the set of Macking and Edit
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO4  CO5  CO5  CO5  CO5  CO6  CO7  CO7  CO7  CO7  CO7  CO7  CO7	To decide and apply appropriate modern testing tool for testing web based or desktop applications.  Course "Web Technology"  To understand web and technologies that makes the web pages.  To understand web and technologies that makes the web pages.  To understand the new of Juscicient and Opera.  To understand the new of Juscicient and Opera.  To the fine Intelligation of Toronic Ferrer and execution of programs on server side.  Analyze given assignment to select sustainable web development design methodology.  Decloped used based application using satisface feel state and server side web technologies.  Declop understand application using satisface feel state and server side web technologies.  Declop unbelland understand the state and server side web technologies.  Declop understand application using satisface feel state and server side web technologies.  Declop unbelland understand the state and server side web technologies.  Declop understand the state and server side state and server side web technologies.  Apply knowledge of ligher order linear differential equations to LTR circuits.  Solve problem tested to Fourier transferry. Transferr and applications to Signal and Image processing.  Apply probability theory for Estimation, predication analysis, Carve Fitting for analysis to extract information from research data and data of applied to machine intelligence.  Apply probability theory for Estimation, predication and decision making to the real time data
CO5  CO of the:  CO1  CO2  CO3  CO4  CO5  CO6  CO of the:  CO1  CO2  CO3  CO4  CO5  CO5  CO5  CO5  CO5  CO5  CO5	To decide and apply appropriate modern tenting tool for tenting web based or desktop applications.  General Vol Technology*  To understand web and technologies that makes the web pages.  To understand web and technologies that makes the web pages.  To understand the use of low-Society and Obert?  To learn the Installation of Toward Server and execution of programs on server side.  Another govern assignment to whele societinable web development design and theory.  To learn the Installation of Toward Server and execution of programs on server side.  Another govern assignment to whele societinable web development design and theory.  Declay to which any objective size in a surface state and server side web section-logies.  Declay without no complex problems using appropriate method, technologies, framework, web services and content management.  Course "Engineering Mathematics III"  Apply knowledge of Ligher order linear differential equations to LEX circuits.  Solve modelme related to Fourier transform, Z. Transform and applications to Sirail and Image processing.  Area statistical methods like correlation, gregorison analysis, Curve Pitting for arabivis to extract information from research data and data of applied to mechanic instillances.  Apply knowledge of Cauchy's Integral Formatio to culture counter of an adoptic into and decision making to the relative data of the content transform and applications.  Perform sector differentiation and integralation and integralation and adoptic content and counter in the concept of conformal mapping required in Image processing, Digital filters and Computer Towards and Computer Internation and integralation and integralation and integralation in the concept of conformal mapping required in Image processing, Digital filters and Computer Towards and Computer Research and Computer Towards and Computer International Comp
COS  CO of the cost of the cos	To decide and apply appropriate modern tenting tool for tenting web based or desktop applications.  General Vol Technology*  To understand web and technologies that makes the web pages.  To understand web and technologies that makes the web pages.  To understand the use of low-Society and Obert?  To learn the Installation of Toward Server and execution of programs on server side.  Another govern assignment to whele societinable web development design and theory.  To learn the Installation of Toward Server and execution of programs on server side.  Another govern assignment to whele societinable web development design and theory.  Declay to which any objective size in a surface state and server side web section-logies.  Declay without no complex problems using appropriate method, technologies, framework, web services and content management.  Course "Engineering Mathematics III"  Apply knowledge of Ligher order linear differential equations to LEX circuits.  Solve modelme related to Fourier transform, Z. Transform and applications to Sirail and Image processing.  Area statistical methods like correlation, gregorison analysis, Curve Pitting for arabivis to extract information from research data and data of applied to mechanic instillances.  Apply knowledge of Cauchy's Integral Formatio to culture counter of an adoptic into and decision making to the relative data of the content transform and applications.  Perform sector differentiation and integralation and integralation and adoptic content and counter in the concept of conformal mapping required in Image processing, Digital filters and Computer Towards and Computer Internation and integralation and integralation and integralation in the concept of conformal mapping required in Image processing, Digital filters and Computer Towards and Computer Research and Computer Towards and Computer International Comp
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COI	To learn the software development process and concept of syntax and semantics of language.
CO2	To classify the different data types and construct the structure of computation.
CO3	To infer different programming paradigms
CO4	To understand the basic of Object Oriented Programming Language.
CO5	To demonstrate the principles Object Oriented Programming using java.
CO6	To use the concept of exception handling and develop a program using applet.