J.B.INSTITUTE OF ENGINEERING & TECHNOLOG

(UGC AUTONOMOUS)

B. TECH. ELECTRONICS AND COMPUTER ENGINEERING

(COURSE STRUCTURE 2014-2015)

I YEAR I – SEMESTER

CODE	Subject Name	L	T/P/D	C
C110A	English	3	-/-/-	3
C110B	Mathematics - I	4	1/0/0	4
C110C	Engineering Physics	3	1/0/0	3
C115A	Computer Programming	3	1/0/0	3
C113A	Engineering Drawing	3	0/0/3	3
C1101	Computer Programming Lab	-	0/3/0	2
C1102	Engineering Physics Lab	-	0/3/0	2
C1104	Engineering Workshop	-	0/3/0	2
C1105	English Lab	-	0/3/0	2
	Total	16	3/12/3	24

I YEAR II – SEMESTER

CODE	Subject Name	L	T/P/D	C
C120A	Technical English	3	1/0/0	3
C120B	Mathematics - II	4	1/0/0	4
C120E	Mathematical Methods	4	1/0/0	4
C120D	Engineering Chemistry	3	-/-/-	3

C125A	Data Structures	3	1/0/0	3
C120F	Professional Ethics	3	-/-/-	3
C1201	Data Structures Lab	-	0/3/0	2
C1203	Engineering Chemistry Lab	-	0/3/0	2
C1204	IT Workshop	-	0/3/0	2
	Total	20	4/9/0	26

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II YEAR I – SEMESTER

CODE	Subject Name	L	T/P/D	C
	Complex Analysis	3	1/0/0	3
	Fundamentals of Electrical Engineering	3	1/-/-	3
	Environmental Studies	3	-/-/-	3
	Electronic Devices & Circuits	4	-/-/-	4
	Switching Theory and Logic Design	4	-/-/-	4
	Object Oriented Programming Through Java	4	1/0/0	4
	Fundamentals of Electrical Engineering Lab	-	0/3/0	2
	Electronic Devices and Circuits Lab	-	0/3/0	2
	Java Programming Lab	-	0/3/0	2
	Total	21	9	27

II YEAR II – SEMESTER

CODE	Subject Name	L	T/P/D	C
	Electronic Circuit Analysis	3	1/0/0	3
	Computer Organization	3	1/0/0	3
	Operating Systems	4	1/0/0	4
	Design & Analysis of Algorithms	4	1/0/0	4
	Web Technologies	4	1/0/0	4
	Electronic Circuit Analysis Lab	-	0/3/0	2

	Operating Systems Lab	-	0/3/0	2
	Web Technologies Lab	-	0/3/0	2
	Comprehensive Assignment			2
	Total	18	0/9/0	26

III YEAR I – SEMESTER

CODE	Subject Name	L	T/P/D	C
	Open Elective 1. E-commerce 2. Intellectual Property Rights 3. Disaster Management	3		3
	Data Base Management Systems	4	-	4
	Linear and DigitalIC Applications	3	1	4
	Principles of Communications	3	1	3
	Software Engineering	3	1	3
	Network Security	4	-	4

	Linear and Digital IC Applications Lab	-	3	2
	Software Engineering Lab	-	3	2
	Data Base Management Systems Lab		3	2
	Total	20	1/0/0	27

III YEAR II – SEMESTER

CODE	Subject Name	L	T/P/D	C
	Management Science for Engineers	3		3
	Microprocessors and Microcontrollers	4		4
	Elective – I: 1. Information Retrieval Systems 2. Computer Forensics 3. Semantic Web and Social networks 4. Adhoc Sensor Networks	3	1	3
	Complier Design	4	-	4
	Data Communications	4	-	4
	Microprocessors and Microcontroller Lab	-	3	2
	Advanced Communication Skills Lab	-	3	2
	Complier Design Lab		3	2
	Industrial Intenship			2
	Total	**24**	**9**	**26**

IV YEAR I SEMESTER

Code	Subject	L	T/P/D	C
	VLSI Design	3	-	3
	Computer Networks	4	-	4
	Embedded Systems.-	4	-	4
	Linux Programming	4		4
	Elective — II 1. Cellular & Mobile Communications 2. Artificial Intelligence 3. Computer	**3**	**1**	**3**
	Elective — III 1. Digital Image Processing 2. Cloud Computing 3. Data Warehousing and Data mining 4. Multimedia Technologies	3	-	3
	Computer Networks Lab	-	3	2
	Linux Programming Lab	-	3	2
	Soft skills Lab -I		3	2
	Total	**24**	**9**	**27**

IV YEAR II SEMESTER

Code	Subject	L	T/P/D	C
	Elective -III:			
	Optical Communications Wireless Sensor Networks Real Time Operating Systems Network Security	4	1	4

	Elective – III Lab	2	3	2
	Industry Oriented Mini Project		-	2
	Seminar		**6**	2
	Project Work		15	10
	Comprehensive Viva		-	2
	Seminar			2
	Soft Skills lab -II	2		2
	Total	**4**	**24**	**28**

Note: All End Examinations (Theory and Practical) are of three hours duration.

T-Tutorial L—Theory P—Practical 0-Drawing C — Credits

Note: Candidate will register for 211 credits and shall obtain 204 credits for award of Degree.

HOD-ECM

ELECTRONICS & COMPUTER ENGINEERING SYLLABUS DETAILS (R14)

J.B. INSTITUTE OF ENGINEERING & TECHNOLOGY
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DEPARTMENT Of ELECTRONICS & COMPUTER ENGINEERING.
II Year B.Tech – I Sem.

SWITCHING THEORY AND LOGIC DESIGN

Unit-1 Number System & Boolean Algebra and Switching Functions

Number systems:Base conversion methods,Coplements of numbers, Codes- binary code, binary coded decimal & its properties, unit distance code,alpha numeric code, error detecting & correcting codes.

Boolean Algebra: Basic theorems &properties,switching functions,canonical & standard forms,algebraic simplification Digital logic gates,properties of XOR gates,universal gates,multilevel NAND/NOR realisations.

Unit-2 Minimization & Design Of Combinational Circuits

Introduction,The Minimization with theorem,The karnaugh map method,Five & six variable maps, Prime & Essential Implecants,Don't care map entries,Using the maps for simplyfiying,Tabular method,Partially specified expressions,multi output minimization & combinational design,Arithmetic circuits,comparator,Multiplexers,Code converters,Wired Logic,Tristate Bus System, Practical aspects related to combinational logic design, hazards & hazard free realizations.

Unit-3 Sequential Machine Fundamentals

Introduction,Basic Architecture, Distinction Between Combinational & Sequential Circuits,Binary Cell,Fundamentals of sequential machine operation,Flip Flops,The D Latched flip flop,colcked T-Flip Flop,Clocked JK Flip Flop,Design of clocked flip flop,Conversion of one flip flop to another,Timing & Triggering considerations,Clock skew.

Unit-4 Sequential Circuit Design & Analysis

Introduction,State Diagram,Analysis of synchronous sequential circuits,Approaches to Design of synchronous sequential Finite State Machines,Design Aspects,State reduction,Design steps,realization of Flip Flops.

Counters-Design of single mode counter,ripple counter,ring counter, shift registers,shift register sequences,ring counter using shift register.

Unit-5

Sequential Circuits-Finite state machine-capabilities & limitations,Mealy & Moore model,minimization of completely specified machines,partion techniques & merger chart methods,concept of minimal cover table.

Algorithmic State Machines-Salient features of the ASM chart,simple examples,system design using data path& control sub systems,control implementations, examples of weighing machine & binary multiplexer.

TEXT BOOKS:

1.Switching &finite automata theory-Zvi kohavi,2ed.,TMH.

2.Digital Design-Morris Mano,3ed.,2006.PHI.

REFERENCES:

1. Digital Logic Applications & Design- John M. Yarbrough, 2006, Thomson Publications.
2. Introduction to switching theory & logic design-Fredriac J.Hill, Gerald R. Peterson,3rd ed.,John wiley & sons Inc.
3. Digital Fundamentals-A systems Approach-Thomos L.Floyd.Pearson,2013.
4. Digital Logic Design-Ye Brian & Holds Worth,Elsevier.
5. Fundamentals Of Logic Design-Charles H.Roth,Cengage L.Earning,5th edition,2004.
6. Digital Logic & State Machine Design-Comer,3rd,Oxford,2013.

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II Year B.Tech. ELECTRONICS & COMPUTER ENGINEERING-I Sem.

COMPLEX ANALYSIS

Unit-1 Linear ODE With Variable Coefficients And Series Solutions(Second Order Only)

Equations Reducible to constant coefficients-Cauchy's & lagrange's differential equations, motivation for series solutions, ordinary point & regular singular point of a differential equation,Transformation of non-zero singular point.Series solution to differential equations around zero.

Unit-2 Special Functions

Legendre differential equations,general solution of legendre equation,properties: Rodrigue's Formula – Recurrence relations,Generating function for legendre's polynomials-Orthogonality. Bessel functions – properties – Recurrence relations – Orthogonality- Generating Function,Trigonometric expansion involving Bessel functions.

Unit-3 Complex Functions – Differentiation & Integration

Complex Function & it's representation on Argand plane,Concepts of limit continuity Differentiability,Analiticity, Cauchy-Riemann conditions,harmonic functions – Milne – Thompson method, Line integral – evaluation along a path and by indefinite integration – Cauchy's integral theorem – Cauchy's integral formula – Generalized integral formula.

Unit-4 Power Series Expansions Of Complex Functions & Contour Integration

Radius of convergence – Expansion in Taylor's series, Maclaurin's series and Laurent series. Singular point –Isolated singular point – pole of order m – essential singularity.Residue – Evaluation of residue by formula and by Laurent series - Residue theorem. Evaluation of integrals of the type: (a) Improper real integrals $\int_{-\infty}^{\infty} f(x)dx$ (b) $\int_{c}^{c+2\pi} f(\cos\theta, \sin\theta)d\theta$

Unit-5 Conformal mapping

Transformation of z-plane to w-plane by a function,Conformal Transformation,Standard Transformations-Translation, rotation & magnification, inversion & reflection,Transformations like log z, z^2 & bilinear transformation,it's properties, determination of bilinear transformation mapping 3 given points .

TEXT BOOKS:

1. Higher Engineering Mathematics by B.S. Grewal Khanna Publications.
2. Advance Engineering Mathematics by Kreyzig,john wiley & sons.

REFERENCES:

1. Engineering Mathematics – III by T.K.V. Iyengar, B.Krishna Gandhi and Others – S.Chand.
2. Higher Engineering Mathematics by B.S. Grewal Khanna Publications.
3. Advance Engineering Mathematics by Jain & S.R.K. Iyengar, Narasa Publications.
4. Complex Variables by R.V. Churchill.
5. Advanced Engineering Mathematics by Allen Jaffrey Academic Press.

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II Year B.Tech I-Sem.

ELECTRONIC DEVICES AND CIRCUITS

Unit-1

P-N Junction Diode: Qualitative Theory of p-n Junction, p-n Junction as a Diode, Diode Equation, Volt-Ampere Characteristics, Temperature dependence of VI characteristic, Ideal versus Practical – Resistance levels (Static and Dynamic), Transition and Diffusion Capacitances, Diode Equivalent Circuits, Load Line Analysis, Breakdown Mechanisms in Semi Conductor Diodes, Zener Diode Characteristics.

Special Purpose Electronic Devices: Principle of Operation & characteristics of tunnel diode(with the help of energy band diagram).Varactor diode,SCR & Semiconductor Photo diode.

Unit-2 Rectifiers and Filters

The p-n junction as a Rectifier, Half wave Rectifier, Full wave Rectifier, Bridge Rectifier, Harmonic components in a Rectifier Circuit, Inductor Filters, Capacitor Filters, L- Section Filters, π- Section Filters, Comparision of Filters, Voltage Regulation using Zener Diode.

Unit-3 Bipolar Junction Transistor & UJT

The Junction Transistor, Transistor Current Components, Transistor as an Amplifier, Transistor Construction, BJT Operation, BJT Symbol, Common Base, Common Emitter and Common Collector Configurations, Limits of Operation , BJT Specifications. BJT Hybrid Model, Determination of h-parameters from Transistor Characteristics, Analysis of a Transistor Amplifier Circuit using h-Parameters,Comparison of CB, CE, and CC Amplifier Configurations.UJT Characteristics.

Unit-4 Transistor Biasing and Stabilization

Operating Point, The DC and AC Load lines, Need for Biasing, Fixed Bias, Collector Feedback Bias, Emitter Feedback Bias, Collector - Emitter Feedback Bias, Voltage Divider Bias, Bias Stability, Stabilization Factors, Stabilization against variations in V_{BE} and β, Bias Compensation using Diodes and Transistors, Thermal Runaway, Thermal Stability.

Unit-5 Field Effect Transistor & FET Amplifiers

The Junction Field Effect Transistor (Construction, principle of operation, symbol) – Pinch-off Voltage - Volt-Ampere characteristics, The JFET Small Signal Model, MOSFET (Construction, principle of operation, symbol), MOSFET Characteristics in Enhancement and Depletion modes. FET Common Source Amplifier, Common Drain Amplifier, Generalized FET Amplifier, Biasing FET, FET as Voltage Variable Resistor, Comparison of BJT and FET.

TEXT BOOKS:

1. Millman's Electronic Devices and Circuits – J. Millman, C.C.Halkias, and Satyabrata Jit, 2ed., 1998, TMH.
2. Electronic Devices and Circuits – R.L. Boylestad and Louis Nashelsky, 9 ed., 2006, PEI/PHI.
3. Introduction to Electronic Devices and Circuits - Rober T. Paynter, PE.

REFERENCES:

1. Integrated Electronics – J. Millman and Christos C. Halkias, 1991 ed., 2008, TMH.
2. Electronic Devices and Circuits - K. Lal Kishore, 2 ed., 2005, BSP.
3. Electronic Devices and Circuits – Anil K. Maini, Varsha Agarwal, 1 ed., 2009, Wiley India Pvt. Ltd.
4. Electronic Devices and Circuits – S.Salivahanan, N.Suresh Kumar, A.Vallavaraj, 2 ed., 2008, TMH.

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II Year B.Tech. I-Sem.
OOP (JAVA PROGRAMMING)

Unit-1

Oops Concepts: Data abstraction, encapsulation, inheritance, benifits of inheritance,Polymorphism,Classes & objects, procedural & object oriented programing paradigm.

Java Programing: History of Java, Java buzzwords, data types, variables, scope and life time of variables, arrays, operators, expressions, control statements, type conversion and casting, simple java program, concepts of classes, objects, constructors, methods, access control, this keyword, garbage collection, overloading methods and constructors, parameter passing, recursion,nested and inner classes,exploring string class.

Unit-2

Inheritance

Hierarchical abstractions, Base class object, subclass, subtype, substitutability, forms of inheritance- specialization, specification, construction, extension, limitation, combination, benefits of inheritance, costs of inheritance. Member access rules, super uses, using final with inheritance, polymorphism- method overriding, abstract classes,the Object class.

Interfaces

differences between classes and interfaces, defining an interface, implementing interface, applying interfaces, variables in interface and extending interfaces.

Packages

Defining, Creating and Accessing a Package, Understanding CLASSPATH, importing packages.

Inner Classes

Uses of Inner classes,local inner classes,anonymous inner classes,static inner classes,examples.

Unit-3

Exception handling

Dealing with errors,Concepts of exception handling, benefits of exception handling, Termination or resumptive models, exception hierarchy, checked & unchecked exceptions,usage of try, catch, throw, throws and finally, & rethrowing exceptions,exception specification, built in exceptions, creating own exception sub classes.

Multithreading

Differences between multithreading and multitasking, thread life cycle,creating threads, thread priorities synchronizing threads,interthread communication, producer consumer pattern.

Unit-4

Collection Frame Work In Java

Introduction to Java collections,Overview of Java collection Frame work,Generics,commonly used collection classes-Array list,linked list,vector,Hash table,Stack,Enumeration,Iterator,String,tokenizer,Random,Scanner,properties.

Files

Streams-Byte streams,character streams,text I/O,binary I/O,random access file operations,file management using file class.

Connecting To Database

JDBC type 1 to 4 drivers,connecting to a database,quering a database & processing the results.

Unit-5

GUI Programing With Java

The AWT class hierarchy,introduction to swing,Swing Vs AWT,Hierarchy for swing components,Containers- JApplet, Jframe,Jdialog,Jpanel,Overview of some swing components- Jbutton,Jlabel,Jtextfield,jtextarea,simple swing applications, layout manager – layout manager types – border, grid & flow.

Event Handling

Events, Event sources, Event classes, Event Listeners,RelationB/W event sources & event listeners, Delegation event model, handling mouse and keyboard events, Adapter classes.

Applets

Inheritance hierarchy for applets,Concepts of Applets, differences between applets and applications, life cycle of an applet, passing parameters to applets,applet security issues.

TEXT BOOKS:

1. Java; the complete reference, 7th editon, Herbert schildt, TMH.

REFERENCES:

1. Introduction to Java programming , Y. Daniel Liang, pearson education.
2. Thinking in Java,Bruce Eckel, pearson education.
3. Oop's through Java,P.Radha Krishna,Universities Press.
4. Programming in Java,S.Malhotra & S.Choudary,Oxford Unix Press.

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II Year Btech-I Sem.
FUNDAMENTALS OF ELECTRICAL ENGINEERING

Unit-1 Introduction to Electrical Circuits

Circuit Concept – R-L-C parameters – Voltage and Current sources – Independent and dependent sources-Source transformation – Voltage – Current relationship for passive elements – Kirchhoff's laws – network reduction techniques – series, parallel, series parallel, star-to-delta or delta-to-star transformation

Magnetic Circuits – Faraday's laws of electromagnetic induction – concept of self and mutual inductance – dot convention – coefficient of coupling – composite magnetic circuit - Analysis of series and parallel magnetic circuits.

Unit-2 Single Phase A.C Circuits

R.M.S and Average values and form factor for different periodic wave forms, Steady state analysis of R, L and C (in series, parallel and series parallel combinations) with sinusoidal excitation – Concept of Reactance, Impedance, Suspectance and Admittance – Phase and Phase difference – concept of power factor, Real and Reactive powers – J-notation, Complex and Polar forms of representation, Complex power– Locus diagrams – series R-L, R-C, R-L-C and parallel combination with variation of various parameters -Resonance – series, parallel circuits, concept of band width and Q factor.

Unit-3 Network theorems

Tellegen's, Superposition, Reciprocity, Thevenin's, Norton's, Maximum Power Transfer, Millman's and Compensation theorems for d.c. and a.c. excitations.

Unit-4 DC Machines

Dc Machine- Principle & operation of DC generators , Different types of DC generators EMF equation of DC machine, OCC characteristics of DC shunt generator principle of operation Dc motor, back emf and torque equation of DC shunt motor torque speed characteristic of dc shunt motor , simple problems.

Unit-5 AC Machines

Principle, construction and operation if 1-phase transformer, emf equation operation of transformer on no load and load, equivalent circuit, OC & SC tests on 1-phasetransformer, transformer regulation,1- phase synchronous generator, Principle,construction & operation,characteristics.Princiole operation of 1- phase induction motor,characteristics(elementary treatment only).

TEXT BOOKS:

1. Electrical Engineering Fundamental by Vincent Deltoro. PHI.
2. Electrical Circuits by Chakravathi, Dhanapat Rai & son.
3. Basic Electrical Engg. Nagasarkar Sukhija, Oxford Publishers 2/e.

REFERENCE BOOKS:

1. Basic Electrical Engineering By M.S.Naidu and S. Kamakshiah, TMH.
2. Network Analysis GK Mithal, Khanna Publishers
3. Higher Electrical Technology, Smith, Pearson.

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II Year B.Tech. ELECTRONICS & COMPUTER ENGINEERING-I Sem.

ENVIRONMENTAL STUDIES

Unit-1 Ecosystems:

Definition, Scope and Importance of ecosystem, Concept of ecosystem, Classification of ecosystems, structure and structural components of ecosystem, Functions of eco system, Food chains, Food webs and ecological pyramids, Flow of energy, Biogeochemical cycles,Bio magnification, Ecosystem value, Services and carrying capacity,field visits.

Unit-2 Natural Resources:

Classification of resources: living and non-living resources, renewable and non-renewable resources. Water resources: use and over utilization of surface and ground water, floods and droughts, dams: benefits and problems. Minerals resources: use and exploitation, environment effects of extracting and using mineral resources case studies. Energy resources: growing energy needs, renewable and non-renewable energy resources, use of alternate energy sources case studies.

Unit-3 BioDiversity & Biotic Resources:

Introduction, definition, genetic, species and ecosystem diversity, Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and intrinsic values,India as mega diversity nation, Hotspots of biodiversity,field visits, Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, conservation of biodiversity: in-situ and ex-situ conservation. National biodiversity act.

Unit-4

Environmental Pollution & Control:

Classification of pollution and pollutants, causes, effects and control technologies, Air pollution: primary and secondary pollutants, automobile and industrial pollution, ambient air quality standards, water pollution: point and non-point sources of pollution, major pollutant of water and their sources, drinking water quality standards, Soil pollution: soil as sink for pollutants, impact of modern agriculture on soil, degradation of soil. Noise pollution: sources, industrial noise. Occupational health hazards, standards, methods of control of noise.Solid waste: types, collection processing and disposal of industrial and municipal solid wastes composition and characteristics of e-waste and its management.Pollution control technologies:Waste water treatment methods:primary,secondary & teritiary.

Overview of air pollution control technologies,concepts of bio remediation.

Global Environmental Problems & Global Efforts:

climate change and their impacts on human environment. ozone depletion and ozone depleting substances(ODS). Deforestation and desertification. International conventions/protocols: earth summit. Kyoto protocol and Montreal protocol.

Unit-5

Environmental Policy, Legislation & Evironmental Impact Assessment(EIA):

National environmental policy, environmental protection act, legal aspects air (prevention and control of pollution) act- 1981, water(prevention and control of pollution) act- 1974, water pollution cess act-1977, forest conservation act, municipal solid waste management and handling rules, biomedical waste management and handling rules, hazardous waste management and handling rules.EIA: Definition of impact: classification of impacts, positive and negative, reversible and irreversible, light, moderate and serve, methods of baseline data acquisition. Impacts on different components: such as human health resources, air, water, flora, fauna and society. Prediction of impacts and impact assessment methodologies. Environmental impact statement (ESI), environmental management plan (EMP): technological solutions, preventive methods, control technologies, treatment technologies: green-belt-development: rain water harvesting, remote sensing and GIS methods.

Towards Sustainable Future:

Concept of sustainable development, threats to sustainability, population and its explosion, crazy consumerism, environmental education. urban sprawl, human health,environmental ethics, environmental economics, concept of green building,Ecological food print,life cycle assessment(LCA),Low carbon life cycle.

TEXT BOOKS:

1. Environmental studies, from crisis to cure by R.Rajagopalan, 2005.
2. Environmental studies by Erach Bharucha 2005, university grants commission, university press.
3. Text book of environmental science and technology by M.Anji Reddy 2007

REFERENCES:

1. Environmental science towards a sustainable future by Richard t. Wright 2008 PHI learning private Ltd. New Delhi.
2. Environmental Engineering and science by Gilbert M.Master and Wendel P.Ella 2008 Learning Pvt.Ltd.

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II Year B.Tech. ELECTRONICS & COMPUTER ENGINEERING-I Sem.

ELECTRONIC DEVICES AND CIRCUITS LAB

PART A: (Only for Viva-voice Examination)

ELECTRONIC WORKSHOP PRACTICE (in 3 lab sessions) :

1. Identification, Specifications, Testing of R, L, C Components (Color Codes), Potentiometers, Switches (SPDT, DPDT, and DIP), Coils, Gang Condensers, Relays, Bread Boards, PCB's
2. Identification, Specifications and Testing of Active Devices, Diodes, BJT's, Low power JFET's, MOSFET's, Power Transistors, LED's, LCD's, SCR, UJT.
3. Study and operation of
   - Multimeters (Analog and Digital)
   - Function Generator
   - Regulated Power Supplies
   - CRO.

PART B: (For Laboratory Examination – Minimum of 10 experiments)

1. Forward & Reverse Bias Characteristics of PN Junction Diode.
2. Zener diode characteristics and Zener as voltage Regulator.
3. Input & Output Characteristics of Transistor in CB Configuration.
4. Input & Output Characteristics of Transistor in CE Configuration.
5. Half Wave Rectifier with & without filters
6. Full Wave Rectifier with & without filters
7. FET characteristics
8. Design Of self bias circuit.
9. Frequency Response of CC Amplifier.
10. Frequency Response of CE Amplifier.
11. Frequency response of common source FET amplifier.
12. SCR characteristics.
13. UJT Characteristics

PART C:

Equipment required for Laboratories:

1.	Regulated Power supplies (RPS)	-	0-30 V
2.	CRO's	-	0-20 MHz.
3.	Function Generators	-	0-1 MHz.
4.	Multimeters		
5.	Decade Resistance Boxes/Rheostats		
6.	Decade Capacitance Boxes		
7.	Ammeters (Analog or Digital)	-	0-20 µA, 0-50µA, 0-100µA, 0-200µA, 0-10 mA.
8.	Voltmeters (Analog or Digital)	-	0-50V, 0-100V, 0-250V
9.	Electronic Components	-	Resistors, Capacitors, BJTs, LCDs, SCRs, UJTs, FETs, LEDs, MOSFETs,diodes Ge& Si type, Transistors – npn,pnp type).

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II Year B.Tech. ELECTRONICS & COMPUTER ENGINEERING-I Sem.

JAVA PROGRAMMING LAB

Objectives:

- To make the student learn an object oriented way of solving problems.
- To teach the student to write programs in Java to solve the problems

Recommended Systems/Software Requirements:

- Intel based desktop PC with minimum of 166 MHZ or faster processor with atleast 64 MB RAM and 100 MB free disk space
- JDK Kit. Recommended

Week1 :

a) Write a Java program that prints all real solutions to the quadratic equation ax2 + bx + c = 0. Read in a, b,c and use the quadratic formula. If the discriminate b2-4ac is negative, display a message stating that there are no real solutions.

b)The Fibonacci sequence is defined by the following rule:

The fist two values n the sequence are 1 and 1. Every subsequent value is the sum of the two values

preceding it. Write a Java program that uses both recursive and non recursive functions to print the nth value in the Fibonacci sequence.

Week 2 :

a) Write a Java program that prompts the user for an integer and then prints out all prime numbers up to that integer.

b) Write a Java program to multiply two given matrices.

c) Write a Java Program that reads a line of integers, and then displays each integer, and the sum of all the integers (Use StringTokenizer class of java.util)

Week 3 :

a) Write a Java program that checks whether a given string is a palindrome or not. Ex: MADAM is a palindrome.

b) Write a Java program for sorting a given

list of names in ascending order.

c) Write a Java program to make frequency count of words in a given text.

Week 4 :

a) Write a Java program that reads a file name from the user, then displays information about whether the file exists, whether the f

ile is readable, whether the file is writable, the type of file and the length of the file

in bytes.

b) Write a Java program that reads a file and displays the file on the screen, with a line number before each line.

c) Write a Java program that displays the number of characters, lines and words in a text file.

Week 5 :

a) Write a Java program that:
i) Implements stack ADT.
ii) Converts infix expression into Postfix form
iii) Evaluates the postfix expression

Week 6 :
a) Develop an applet that displays a simple message.
b) Develop an applet that receives an integer in one text field, and computes its factorial Value and returns it in another text field, when the button named "Compute" is clicked.

Week 7 :
Write a Java program that works as a simple calculator. Use a grid layout to arrange buttons for the digits and for the +, ,*, % operations. Add a text field to display the result.

Week 8 :
a) Write a Java program for handling mouse and key events.
Week 9 :
a) Write a Java program that creates three threads. First thread displays "Good Morning" every one second, the second thread
displays "Hello" every two seconds and the third thread displays "Welcome" every three seconds.
b) Write a Java program that correctly implements producer consumer problem using the concept of inter thread communication.
Week 10 :
Write a program that creates a user interface to perform integer divisions. The user enters two numbers in the textfields, Num1 and
Num2. The division of Num1 and Num2 is displayed in the Result field when the Divide button is clicked. If Num1 or Num2 were
not an integer, the program would throw a NumberFormatException. If Num2 were Zero, the program would throw an
ArithmeticException Display the exception in a message dialog box.
Week 11 :
a) Write a java program that simulates a traffic light. The program lets the user select one of three lights: red, yellow, or green.
When a radio button is selected, the light is turned on, and only one light can be on at a time No light is on when the programstarts.
b) Write a Java program that allows the user to draw lines, rectangles and ovals.
Week 12 :
a) Write a java program to create an abstract class named Shape that contains an empty method named numberOfSides ( ).Provide three classes named Trapezoid, Trangle and Hexagon such that each one of the classes extends the class Shape. Each one of the classes contains only the method numberOfSides ( ) that shows the number of sides in the given geometrical figures.
b) Suppose that a table named Table.txt is stored in a text file. The first line in the file is the header, and the remaining lines

correspond to rows in the table. The elements are eparated by commas. Write a java program to display the table using Jtable component.

TEXT BOOKS :

1. Java How to Program, Sixth Edition, H.M.Dietel and P.J.Dietel, Pearson Education/PHI
2. Programming with Java,M.P.Bhave and S.A.Patekar, Pearson Education
3. Big Java, 2nd edition, Cay Horstmann, Wiley Student Edition, Wiley India Private Limited.
4. Introduction to Programming with Java, J.Dean & R.Dean, McGraw Hill education.
5. Java Programming, D S Malik, cengage learning, India Edition.
6. Object Oriented Programming through Java, P. Radha Krishna,Universities Press.
7. Essentials of Java Programming,Muthu.C,TMH.
8. Advanced Programming in Java 2,K.Somasundaram,Jaico.
9. The Art,Philosophy,and Science of OOP with Java,R.Miller,R.Kasparian,SPD.

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FUNDAMENTALS OF ELECTRICAL ENGINEERING LAB

The following experiments are required to be conducted as compulsory experiments

1.Verification of locus diagram
2.Seies and parallel resonance RL and RC circuits
3.Verification of super position and reciprocity theorem
4. Verification of thevemins and nortans theorem
5.Verification of maximum power transfer theorem
6.Verification of millimans theorem
7.Verification of compensation theorem
8.Transient response of RL and RC circuits
9.OC & SC TEST of 1-phase transformer
10.Swinburne's test on DC shunt machines
11. Load test on DC shunt motor
12.Determination of self ,mutual inductances and co-efficient of coupling

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II Year B.Tech – II Sem.
WEB TECHNOLOGIES

UNIT-I:

INTRODUCTION TO PHP:

Declaring variables,data types,arrays,strings,operators,expressions,control structures,functions,reading data from web form controls like text boxes,radio buttons,lists etc.,Handlings File Uploads,Connecting to database(MYSQL as reference),executing simple queries,handling results,Handling sessions and cookies.

FILE HANDLING IN PHP:

File Operations like opening,closing,reading,writing,appending,deleting etc.on text and binary files,listing directories.

UNIT-II:

XML:

Introduction to XML,Defining XML tags,their attributes and values,Document Type Definition,XML Schemas,Document Object Model,XHTML.

Parsing XML Data-

DOM and SAX parsers in java.

UNIT-III:

INTRODUCTION TO SERVLETS:

Common Gateway Interface(CGI),Lifecycle of a servlet,deploying a servlet, The Servlet API,Reading Servlet parameters,Reading Initalization parameters,Handling Http Request & Responses,Using Cookies and Sessions,connecting to a database using JDBC.

UNIT-IV:

INTRODUCTION TO JSP:

The Anatomy of a JSP Page,JSP Processing,Declarations,Directives,Expressions,Code Snippets,Implicit objects,Using Beans in JSP Pages,Using COOKIes and session for session tracking,connecting to database in JSP.

UNIT-V:

CLIENT SIDE SCRIPTING:

Introduction to Javascript: Javascript language-declaring variables,scope of variables,functions,event handlers(on click,onsumbit etc.),Document Object Model,Form validation.

Simple AJAX application.

TEXT BOOKS

1.Programing world wide web-sebesta, pearson.

2. Java: the complete reference, 7th edition, Herbert Schildt, TMH.

3. Core SERVELETS AND JAVA SERVER PAGES VOLUME 1: CORE TECHNOLOGIES By Marty Hall and Larry Brown Pearson (Units-5,6,7,8).

REFERENCE BOOKS

1. Web programing, building internet applications, Chris Bates 2nd edition, WILEY Dreamtech (Units-1,2,3).

2. Internet & World Wide Web- How to program by Dietel& Nieto PHI/Pearson Education Asia.

3. Jakarta struts cookbook, BillSiggelkow, S P D O′Reilly for chapter 8.

4. Murach′s beginning JAVA JDK 5, Murach, SPD.

5. An introduction to Web design & programming- Wang-Thomson.

6. Web applications technologies concepts-knuckles, John Wiley.

7. Programing World Wide Web-sebesta,pearson.

8. Web Warrior Guide toweb programming-Bai/Ekedaw-Thomas.

9. Beginning Web Programming- Jon Duckett WROX.

10. Java server pages, Pekowsky, Pearson.

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II Year B.Tech – II Sem.

ELECTRONIC CIRCUIT ANALYSIS

Unit-1

Single Stage Amplifiers

Classification of Amplifiers – Distortion in Amplifiers, Analysis of CE, CC and CB Configurations with simplified Hybrid Model, Analysis of CE amplifier with Emitter Resistance and Emitter follower, Miller's Theorem and its dual, Design of Single Stage Amplifier using BJT

Multi Stage Amplifiers

Analysis of Cascaded RC Coupled BJT Amplifiers, Cascode Amplifier, Darlington Amplifier, Different Coupling Schemes in Amplifiers- RC Coupled Amplifier, Transformer Coupled Amplifier, Direct Coupled Amplifier.

Unit-2 BJT Amplifiers & MOS Amplifiers

BJT Amplifiers-Frequency Response:

Logarithms, Decibels, General Frequency considerations, Frequency Response of BJT Amplifier, Analysis at Low and High Frequencies, Effect of coupling and bypass capacitors, The Hybrid-pi- Common Emitter Transistor Model, CE Short Circuit Current Gain, Current Gain with Resistive Load, Single Stage CE Transistor Amplifier Response, Gain-Bandwidth Product, Emitter follower at higher frequencies.

MOS Amplifiers:

Basic concepts, MOS Small signal model, Common source amplifier with Resistive load.

Unit-3 Feedback Amplifiers & Oscillators

Feedback Amplifiers:

Concepts of Feedback, Classification of Feedback Amplifiers, General characteristics of Negative Feedback Amplifiers, Effect of Feedback on Amplifier Characteristics, Voltage Series, Voltage Shunt, Current Series and Current Shunt Feedback Configurations, Illustrative Problems.

Oscillators:

Classification of Oscillators, Conditions for Oscillations, RC Phase Shift Oscillator, Generalized analysis of LC Oscillators - Hartley and Colpitts Oscillators, Wein-Bridge & Crystal Oscillators, Stability of Oscillators.

Unit-4 Large Signal Amplifiers:

Classification, Class A Large Signal Amplifiers, Transformer Coupled Class A Audio Power Amplifier, Efficiency of Class A Amplifier, Class B Amplifier, Efficiency of Class B Amplifier, Class B Push-Pull Amplifier, Complementary Symmetry Class B Push-Pull Amplifier, Distortion in Power Amplifiers, Thermal Stability and Heat Sinks.

Unit-5 Tuned Amplifiers

Introduction, Q-Factor, Small Signal Tuned Amplifiers, Effect of Cascading Single Tuned Amplifiers on Bandwidth, Effect of Cascading Double Tuned Amplifiers on Bandwidth, Stagger Tuned Amplifiers, Stability of Tuned Amplifiers.

TEXT BOOKS:

1. Integrated Electronics – Jacob Millman and Christos C Halkias, 1991 2nd ed., 2008, TMH.
2. Electronic Devices and Circuits – S.Salivahanan, N.Suresh Kumar, A.Vallavaraj, 2 ed., 2009, TMH.
3. Design of Analog CMOS Integrated Circuits – Behzad Razavi, 2008, TMH.

REFERENCES:

1. Electronic Devices and Circuit Theory – Robert L. Boylestad, Louis Nashelsky, 9 ed., 2008 PE.
2. Introductory Electronics Devices and Circuits – Robert T.Paynter, 7ed. 2009, PEI.
3. Electronic Circuit Analysis – K.Lal Kishore, 2004, BSP.
4. Electronic Devices and Circuits, David A. Bell - -5 ed., Oxford University Press.
5. Micro electric Circuits - Sedra and Smith – 5 ed., 2009, Oxford University Press.

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II Year B.Tech – II Sem.

DESIGN AND ANALYSIS OF ALORITHMS

UNIT-I

Introduction:

Alogrithm,pseudo code for expressing algorithms,Performance Analysis-space complexity,Time complexity,Asympotic Notation-Big oh notation,Omega notation,Theta notation and Little oh Notation,Probabilistic analysis,Amortized complextity.

Divide and conquer:

General method,applications-Binary search,Quick sort,Merge sort,Strassen's Matrix Multiplication.

UNIT-II

Searching and Traversal Techniques:

Efficiecnt non-recursive binary tree traversal algorithms,Disjoint set operations,union and find algorithms,Spanning tress,Graph traversals-Breadth first search and Depth first search,AND/OR graphs,game tress,connected components,Bi-connected components.

UNIT-III

Greedy method:

General method,applications-job sequencing with deadlines,0/1 knapsack problem,minimum cost spanning tress,Single source shortest path problem.

Dynamic Programming:

General method,applications-Multistage graphs,Optimal binary search tress,0/1 knapsack problem,All pairs shortest path problem,Travelling sales person problem,Reliability design.

UNIT-IV

Backtracking:

General method,applications-n-queen problem sum of subsets problem,graph coloring,Hamilton cycles.

Branch and Bound:

Genaral method,applications-Travelling sales perspn problem,0/1 knapsack problem-LC Branch and Bound solution,FIFO Branch and Bound solution.

UNIT-V

NP-Hard and NP-Complete problems:

Basic concepts, Non-deterministic algorithms,NP-Hard and NP-Complete classes,NP-Hard problems,Cook's theorem.

TEXT BOOKS:

1.Fundamentals of Computer Algorithms,Ellis Horowitz,Satraj Sahni and Rajasekhara,Galgotia publications pvt.Ltd.

2. Design and Analysis Algorithms-Parag Himanshu Dave,Himanshu Bhalchandra Dave Publisher:Pearson

3.Alogirthm Design: Foundation,Aalysis and Internet examples, M.T.Goodrich and R.Tomassaia wiley and sons.

REFERENCES:

1.Introduction to Alogrithm, 3rd edition,T.H.Cormen.C.E.Leiserson,R.L.Rivest,and C.Stein, PHI.

2.Introdution to Design and Analysis of Algorithm a strategic approach,R.C.T.Lee,S.S.Tseng,R.C.Chang and T.Tsai,Mc Graw Hill.

3.Data structures and Algorithm Analysis in C++,Allen Weiss,Second edition,Pearson education.

4.Design and analysis of algorithms, Aho,Ullman and Hopcroft,Pearson education.

5.Algorithms- Richard Johnson baugh and Marcus Schaefer, Pearson Education.

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II Year B.Tech – II Sem.
COMPUTER ORGANIZATION AND ARCHITECTURE

Unit-1 Basic Computer Organization

Functions of CPU,I/O units,Memory,Instructions:instruction formats- One Address,Two Addresses,Zero Addresses & Three Addresses & comparision,addressing modes with numeric examples:program control-status bit conditions,conditional branch instructions,Program interrupts: Types of interrupts.

Unit-2 Input-Output Organization

Input-Output Interface,I/O bus & modules,I/O Vs memory bus,Isolated Vs memory mapped I/O,Asynchronous data transfer Modes of Transfer-Strobe control,Hand shaking; Asynchronous serial transfer- Asynchronous communication interface, Modes of transfer-Programmed I/O, Interrupt driven I/O, DMA, DMA controller, DMA transfer,IOP-CPU IOP,Communication,Intel 8089 IOP.

Unit-3 Memory Organizations

Memory hierarchy,memories,RAM,ROM chips,Memory Address map,Memory connection to CPU,Associate memory,Cache memory,data cache,instruction cache,miss & hit ratio,Access time, associative,set associative mapping,waiting into cache,introduction to virtual memory.

Unit-4 8086 CPU Pin Diagram

Special functions of general purpose registers,segment register,concept of pipelining,8086 flag register,Addressing modes of 8086.

Unit-5 8086 Instruction Formats

Assesmbly language programs involving branch & call instructions,sorting,evaluation of arithmetic expressions.

TEXT BOOKS:

1. Computer Organization – Carl Hamacher, Zvonks Vranesic, SafeaZaky, Vth Edition, McGraw Hill.
2. Computer Systems Architecture – M.Moris Mano, IIIrd Edition, Pearson/PHI

REFERENCES:

1. Computer Organization and Architecture – William Stallings Sixth Edition, Pearson/PHI
2. Structured Computer Organization – Andrew S. Tanenbaum, 4th Edition PHI/Pearson
3. Fundamentals or Computer Organization and Design, - Sivaraama Dandamudi Springer Int. Edition.
4. Computer Architecture a quantitative approach, John L. Hennessy and David A. Patterson, Fourth Edition Elsevier
5.Computer Architecture: Fundamentals and principles of Computer Design, Joseph D. Dumas II, BS Publication.

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II Year B.Tech – II Sem.

OPERATING SYSTEM

Unit-1 Operating System Introduction

Operating systems objectives & functions,computer system architecture,OS structure,OS operations,evolution of OS-simple batch,multiprogramming,time shared, personal computer, parallel, distributed, realtime & special purpose systems,OS services,User OS interface,system calls,types of system calls,system programs, OS design & implementation,OS structure, virtual machines.

Unit-2

Process & CPU Scheduling

Process concepts-The process,Process states, process control block, Threads, process scheduling-scheduling queues, schedulers, context switch, preemptive scheduling, Dispatcher, Scheduling criteria, Scheduling algorithms, multi-processor scheduling, real-time scheduling, thread scheduling, case studies: linux, windows.

Process Co-ordination

Process Synchronization,critical section problem,peterson's solution,synchronization hardware,semaphores & classic problems of synchronization,monitors,case studies:linux,windows.

Unit-3 Memory Management & Virtual Memory

Logical & physical address space, swapping, contiguous allocation, paging, structure of page table, segmentation, segmentation with paging, vitual memory, demand paging, performance of demand paging, page replacement, page replacement algorithms, allocation of frames, trashing.

Unit-4

File System Interface

The concept of a file, Access methods, Directory structure, file system mounting, File sharing protection.

File System Implementation

File system structure, File system implementation, Directory implementation, Allocation methods, Free-space management, Efficiency and performance,

Mass-storage structure

Overview of Mass-storage structure, Disk structure, Disk attachment, Disk scheduling, Swap-space management,Disk management.

Unit-5

Principles of Deadlock

System model, Deadlock characterization,methods of handling deadlocks, Deadlock prevention, Detection and avoidance, Recovery form deadlock.

Protection

Protection, Goals of protection, Principles of protection, domain of protection, Access matrix, Implementation of access matrix, Access control, Revocation of access rights, Capability-based systems, Language-based protection.

TEXT BOOKS:

1. Operating System Concepts- Abraham Silberchartz, Peter B. Galvin Greg Gagne., 8th edition, John Wiley.

2. Operating systems- A Concept based Approach-D.M Dhamdhere, 2nd Edition, TMH

REFERENCES:

1. Operating System- Internals and Design Principles, Stallings, sixth Edition-2009, Pearson education.

2. Modern Operating Systems, Andrew S Tancubaum 2nd edition PHI.

3. Principles of Operating Systems, B.I.Stuart, Cengage learning, India Edition.

4. Operating Systems, A.S Godbole, 2nd Edition, TMH

5. An Introduction to Operating Systems, P.C.P, Bhatt, PHI.

6. Opearting Systems, G.Nutt, N.Chaki and S.Neogy, 3rd Edition, Pearson Education.

7. Operating Systems, R.Elmasari,A.g Carrick and D.Levine, Mc Graw Hill.

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II Year B.Tech – II Sem.

ELECTRONIC CIRCUIT ANALYSIS LAB

I) Design and Simulation in Simulation Laboratory using any Simulation Software

1. Common Emitter Amplifier.
2. Common Source Amplifier.
3. Two Stage RC Coupled CE Amplifier.
4. RC Phase Shift Oscillator Using Transistor.
5. Class A Series Fed Power amplifier (without transformer).
6. Class B Complementary Symmetry Push Pull Power Amplifier.
7. Current shunt & Voltage series Feed Back Amplifier.
8. Cascode Amplifier.
9. Wein Bridge oscillator using Transistors.
10. Common Base (BJT)/Common Gate (JFET) Amplifier.

II) Testing in the Hardware Laboratory (6 Experiments)

A) Any Three Circuits Simulated in Simulation Laboratory

B) Any three of the following

1. Class A Power Amplifier (with transformer load)
2. Class C power Amplifier
3. Single Tunned Voltage Amplifier
4. Hartley & Colpitt's Oscillator
5. Darlington Pair
6. MOS CS Amplifier

Equipment required for the laboratory

1. For software simulation of electronic circuits
   - i) computer systems with latest specifications.
   - ii) connected in LAN(optional).
   - iii) OS(Windows XP).
   - iv) Suitable simulation software.
2. For hardware simulation of electronic circuits
   - i) R.P.S(0-30v).
   - ii) CRO's.
   - iii) Function Generators.
   - iv) Multimeters.
   - v) Components.
3. Win XP/Linux etc.

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II Year B.Tech – II Sem.
WEB TECHNOLOGIES LAB

Week-1:
Design the following static web pages required for an online book store web site.
1)HOMEPAGE:

The static home page must contain three frames.

Top frame, left frame, right frame.

2)LOGIN PAGE:

3)CATOLOGUE PAGE:

The catalogue page should contain the details of all the books available in the web site in a table.

Week-2:
4)CART PAGE:

The cart page contains the details about the books whih are added to the cart.

5)REGISTRATION PAGE:

create a “registration form” with the following fields

1)Name(text fields)

2)Password(password field)

3)E-mail id(text field)

4)Phone number(text field)

5)Sex(radio button)

6)Date of birth(3 select boxes)

7)Languages known(hek boxes-eglish,telugu,hindi,tamil)

8)Address(text area)

Week-3:

VALIDATION:

Write JavaScript to validate the following fields of the above registration page.

1)name

2)password

3)E-mail id

4) Phone number

Week-4:

Design a webpage using CSS(cascading style sheets)which includes the following:

1) Use different font,styles:

2)Set a background image for both the page and single elements on the page.

3)Control the repetition of the image with the background –repeat property.

4)Define styles for links as

A:link

A:visited

A:ative

A:hover

5)Work with layers

6)Add a customized cursor

Week-5:

Write an XML file which display the book information which includes the following:

1)Title of the book

2)Author Name

3)ISBN number

4)Publisher name

5)Edition

6)Price

Write a document Type Definition(DTD) to validate the above XML file. Display the XML file as follows.

The contents should be displayed in a table. The header of the table should be in olor GREY. And the Author names column should be displayed in one color and should be capitalized and in bold. Use your own colors for remaining columns.

Use XML schemas XSL and CSS for the above purpose.

Week-6:
VISUAL BEANS:
Create a simple visual bean with a area filled with a color.

The shape of the area depends on the property shape. If it is set to true then the shape of the area is Square and it is Circle,if it is false.

The color of the area should be changed dynamically for every mouse click.

The color should also be changed if we change the color in the "property window".

Week-7:
1)Install TOMCAT web server and APACHE.
While installation assign port number 4040 to TOMCAT and 8080 to APACHE. Make sure that these ports are available i.e., no other process is using this port.

2)Access the aboe developed sati web pages for books web site,using these serers by putting the web pages developed in week-1 and week-2 in the doumen root.

Access the pages by using the urls: http://localhost:4040/rama/books.html (for tomcat)

http://localhost:8080/books.html (for Apache)

Week-8:
USER Authentication:
Assume four users user1,user2,user3 and user4 having the passwords pwd1,pwd2,pwd3 and pwd4 respectively. Write a servelet for doing the following.

1.Create a Cookie and add these four user id's and passwords to this Cookie.

2.Read the user id and passwords entered in the Login form (week1)and authenticate with the values(user id and passwords) available in the cookies.If he is a valid user (ie.,user-name and password match) you should welcome him by name(user-name) else you should display. " You are not an authenticated user".Useinit- parameters to do this. Store the user-names and passwords in he webinf.xml and access them in the servelet by using the getInitParameters() method.

Week-9:

Install a database(Mysql or Oracle).

Create a table which should contain at least the following fields:name,password,email-id,phone number(these should hold the data from the registration form)

Practice 'JDBC' connectivity.

Write a java program/servlet/JSP to connect to that database and extract data from the tables and display them. Experiment with various SQL queries.

Insert the details of the users who register with the web site,whenever a new user clicks the sudmit button in the registration page(week 2).

Week-10:

Write a JSP which does the following job:

Insert the details of the 3 or 4 users who register with the web site (week9) by using registration form.Autenticate the user when he submits the login form using the user name and password from the database(similar to week8 instead of cookies)

Week-11:

Create tables in the database which cotain the details of items(books in our case like book name ,price ,Quantity ,Amount) of each category.Modify your catalogue page (week2) I suh a way that you should connect to the database and extract data from the tables and display them in the catalogue page using JDBC.

Week-12:

HTTP is a stateless protocol. Session is required to maintain the state. The user may add some items to cart page for the selecteditems. He can check the cart page for the selected items. He may visit the catalogue again and select some more items.Here our interest is the selected items should be added to the old cart rather than a new cart.

Multiple users can do the same thing at a time(ie.,from different systems in the LAN using the ip-address instead of localhost).This can be achieved through the use of sessions.Every user will have his own session which will have his own session which will be created after his usefull login to the website.When the user logs out his session should get invalidated(by using the method session invalidate ()).

Modify your atalogue ad art JSP pages to achieve the above mentioned functionality using sessions.

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OPERATING SYSTEMS LAB

1. Simulate the following CPU scheduling algorithms
a) Round Robin b) SJF
c) FCFS d) Priority
2. Simulate all file allocation strategies
a) Sequential b) SJF
c) Linked
3. Simulate MVT and MFT
4. Simulate all Files Organization Techniques
a) Single level directory b) Two level
c) Hierarchical d) DAG
5. Simulate Bankers Algorithm for Dead Lock Avoidance
6. Simulate Bankers Algorithm for Dead Lock Prevention
7. Simulate all page replacement algorithms
a) FIFO b) LRU
c) LFU
8.Simualte paging technique of memory management.