

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (4th Semester)

Course No : CSE-206 N
Course Title : Digital Data Communication
Name of Teacher: Er. ROHIT GARG

L T P/D TOTAL
3 1 - 04
Sessional: 25 Marks
Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|---|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Basic constituents of Communication Systems need of modulation, Amplitude modulation, spectrum of AM wave, modulation index, DSBSC modulation, | 3 | |
| 2 | SSB Modulation, vestigial side band modulation. ANGLE MODULATION: Frequency and Phase Modulation, | 3 | |
| 3 | spectrum of FM Wave, modulation index and Bandwidth of FM Signal, NBFM and WBFM. | 3 | |
| Unit-II | | | |
| 4 | Digital data, Digital signals: Encoding schemes: NRZ-L, NRZ-I, Manchester-Diff-Manchester-encoding,Pseudoternary-Bipolar-AMI,B8ZS-HDB3 – Evaluation factors-Digital data, analog signals: | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Encoding Techniques –ASK-FSK-PSK-QPSK- Performance comparison-Analog data, digital signals: Quantization- Sampling theorem-PCM-Delta modulation-Errors- comparison- | 3 | |
| 6 | Analog Data, analog signals: Need for modulation -0 Modulation methods – Amplitude modulation- Angle modulation- Comparison. | 3 | |
| Unit -III | | | |
| 7 | Asynchronous and synchronous transmission – Error Detection techniques: Parity checks – Cycle redundancy checks-Checksum | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | Error Correcting codes: Forwards and backward error corrections, Transmission media. Communication Topologies. | 3 | |
| 9 | DTE & DCE interface: Characteristics of DTE-DCE interface. Interfaces: Rs-232-C, Rs-449/422, A/423-A. | 3 | |
| Unit IV | | | |
| 10 | Multiplexing:Advantages – Types of Multiplexing – FDM – Synchronous TDM – Statistical TDM or Asynchronous TDM, Study of their characteristics. | 3 | |
| 11 | Satellite Communication Systems:Satellite parameters and configurations – Capacity allocation, Frequency Division FDMA; Time Division TDMA- Fixed assigned multiple access (FAMA), | 3 | |
| 12 | Demand assign multiple access (DAMA) – The | 3 | |

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| | concept of spread spectrum: FHSS, DSSS – CDMA – Transmission and reception. | | |
| | Total | 36 | |

Reference Books:

- Forouzen, “Data Communication & Networking”, Tata McGraw Hill
- Proakis, “Digital Communications”, McGraw Hill

Name & Sign of Teacher

Head’s Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (4th Semester)

Course No : CSE-204 N
 Course Title : Internet Fundamentals
 Name of Teacher: Er. EKTA

L T P/D TOTAL
 3 0 - 03
 Sessional: 25 Marks
 Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Introduction to networks and internet, history, Internet, Intranet & Extranet, Working of Internet, Internet Congestion, internet culture, business culture on internet | 3 | |
| 2 | Collaborative computing & the internet. Modes of Connecting to Internet, Internet Service Providers(ISPs), | 3 | |
| 3 | Internet address, standard address, domain name, DNS, IP.v6.Modems, Speed and time continuum, communications software; internet tools. | 3 | |
| Unit-II | | | |
| 4 | Introduction, Miscellaneous Web Browser details, searching the www: Directories search engines and meta search engines, search fundamentals, search strategies, working of the search engines, | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Telnet and FTP, HTTP, Gopher Commands, TCP/IP. Introduction to Browser, Coast-to-coast surfing, hypertext markup language, Web page installation | 3 | |
| 6 | Web page setup, Basics of HTML & formatting and hyperlink creation.Using FrontPage Express, Plug-ins. | 3 | |
| Unit -III | | | |
| 7 | Introduction, advantages and disadvantages, User Ids, Pass words, e-mail addresses, message components, message composition, mailer features, E-mail inner workings, E-mail management, | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | MIME types, Newsgroups, mailing lists, chat rooms, secure-mails, SMTP, PICO, Pine, Library cards catalog, online ref. works. | 3 | |
| 9 | Languages: Basic and advanced HTML, Basics of scripting languages – XML, DHTML, Java Script. | 3 | |
| Unit IV | | | |
| 10 | Introduction to Web Servers: PWS, IIS, Apache; Microsoft Personal Web Server. Accessing & using these servers. | 3 | |

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| 11 | Privacy and security topics: Introduction, Software Complexity, Attacks, security and privacy levels, security policy, accessibility and risk analysis | 3 | |
| 12 | Encryption schemes, Secure Web document, Digital Signatures, Firewalls, Intrusion detection systems | 3 | |
| | Total | 36 | |

Reference Books:

- Internet & World Wide Programming, Deitel,Deitel& Nieto, 2012, Pearson Education,
- Fundamentals of the Internet and the World Wide Web, Raymond Greenlaw and Ellen Hepp, TMH-2012

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (4th Semester)

Course No : CSE-208 N
Course Title : Microprocessor & Interfacing
Name of Teacher: Er. Deepti Nain

L T P/D TOTAL
3 1 - 04
Sessional: 25 Marks
Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|--------------------------------|----------------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Evolution of Microprocessor, Introduction to 8085 - 8085 architecture | 3 | |
| 2 | Pin Details - Addressing Modes -Instruction Set | 3 | |
| 3 | Assembler Directives, Instruction Timing Diagram | 3 | |
| Unit-II | | | |
| 4 | 8086 CPU ARCHITECTURE: 8086 Block diagram; description of data registers, address registers; pointer and index registers, PSW, Queue, BIU and EU. 8086 Pin diagram descriptions. Generating 8086 CLK and reset signals using 8284. WAIT state generation | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Microprocessor BUS types and buffering techniques, 8086 minimum mode and maximum mode CPU module. MAIN MEMORY SYSTEM DESIGN: Memory devices, | 3 | |
| 6 | 8086 CPU Read/Write timing diagrams in minimum mode and maximum mode. Address decoding techniques. Interfacing SRAMS; ROMS/PROMS. Interfacing and refreshing DRAMS. | 3 | |
| Unit -III | | | |
| 7 | 8086 INSTRUCTION SET: Instruction formats, addressing modes, Data transfer instructions, string instructions, logical instructions, | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | arithmetic instructions, transfer of control instructions; process control instructions; Assembler directives. | 3 | |
| 9 | 8086 PROGRAMMING TECHNIQUES: Writing assembly Language programs for logical processing, arithmetic processing, timing delays; loops, data conversions. | 3 | |
| Unit IV | | | |
| 10 | Parallel and Serial I/O Port design and address decoding. Memory mapped I/O Vs Isolated I/O Intel's 8255 and 8251 - description and interfacing with 8086. ADCs and DACs, - types, operation and interfacing with 8086. | 3 | |
| 11 | Interfacing Keyboards, alphanumeric displays, multiplexed displays, and stepper motor, optical | 3 | |

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| | encoder with 8086. | | |
| 12 | INTERRRUPTS AND DMA: 8086 Interrupt mechanism; interrupt types and interrupt vector table. Applications of interrupts, Intel's 8259. DMA operation. Intel's 8237. | 3 | |
| | Total | 36 | |

Reference Books:

- Barry B. Brey, "The Intel Microprocessor 8086/8088, 80186", Pearson Education,
- D.V. Hall, Microprocessors and Interfacing, McGraw Hill 2nd ed

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (4th Semester)

Course No : CSE-202 N
 Course Title : Object Oriented Programming
 Name of Teacher: Er. SRISHTY

L T P/D TOTAL
 3 1 - 04
 Sessional: 25 Marks
 Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Introduction to C++, C++ Standard Library, Illustrative Simple C++ Programs. Header Files, Namespaces, Application of object oriented programming. | 3 | |
| 2 | Object Oriented Concepts, Introduction to Objects and Object Oriented Programming, Encapsulation, Polymorphism, Overloading, Inheritance, Abstract Classes, Accessifier (public/protected/ private), | 3 | |
| 3 | Class Scope and Accessing Class Members, Controlling Access Function, Constant, Class Member, Structure and Class | 3 | |
| Unit-II | | | |
| 4 | Friend Function and Friend Classes, This Pointer, Dynamic Memory Allocation and Deallocation (New and Delete), Static Class Members, Constructors, parameter Constructors and Copy Constructors, Deconstructors, | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Introduction of inheritance, Types of Inheritance, Overriding Base Class Members in a Derived Class, Public, Protected and Private Inheritance, | 3 | |
| 6 | Effect of Constructors and Deconstructors of Base Class in Derived Classes | 3 | |
| Unit -III | | | |
| 7 | Polymorphism, Pointer to Derived class, Virtual Functions, Pure Virtual Function, Abstract Base Classes, Static and Dynamic Binding, Virtual Deconstructors. | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | Fundamentals of Operator Overloading, Rules for Operators Overloading | 3 | |
| 9 | Implementation of Operator Overloading Like <<, >> Unary Operators, Binary Operators. | 3 | |
| Unit IV | | | |
| 10 | Text Streams and binary stream, Sequential and Random Access File, Stream Input/ Output Classes, Stream Manipulators. | 3 | |
| 11 | Basics of C++ Exception Handling, Try, Throw, Catch, multiple catch, Re-throwing an Exception, Exception specifications | 3 | |
| 12 | Templates: Function Templates, Overloading Template Functions, Class Template, Class | 3 | |

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| | Templates and Non- Type Template arguments. | | |
| | Total | 36 | |

Reference Books:

- Object Oriented Programming in Turbo C++ by Robert Lafore, 1994,
- K. Shukla, Object Oriented Programming in c++, wileyindia

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Course Plan (4th Semester)

Course No : CSE-307
Course Title : OPERATING SYSTEMS
Name of Teacher: Er. SRISHTY

L T P/D TOTAL
3 1 3 10
Sessional: 25 Marks
Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|---|--------------------------------|----------------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Operating system functions and characteristics, historical evolution of operating system, Real time systems, Distributed systems | 2 | |
| 2 | Methodologies for implementation of o/s service system calls, System programs, interrupt mechanisms, Concept of Threading | 2 | |
| 3 | File System: Functions of the systems, file access and allocation methods | 2 | |
| 4 | Directory system: structured organization | 1 | |
| 5 | Directory and file protection mechanism, implementation issues; hierarchy of file and device management | 1 | |
| 6 | CPU Scheduling: Levels of scheduling, Comparative study of scheduling algorithms, Multiple processor scheduling. | 2 | |
| Content for 2nd Sessional Test | | | |
| Unit-II | | | |
| 7 | Storage and Device Management: Storage Management: Storage allocation methods: single contiguous allocation, multiple contiguous allocation | 2 | |
| 8 | Paging, Segmentation, Combination of Paging and Segmentation, | 2 | |
| 9 | Virtual memory concepts, Demand paging, Page replacement algorithms | 2 | |
| 10 | Thrashing Device Management: Hardware organization, Device scheduling, policies and I/O Management | 2 | |
| 11 | Protection: Mechanism and Policies, implementation. | 2 | |
| Content for 3rd Sessional Test | | | |
| Unit -III | | | |
| 12 | Deadlocks and Concurrency Control: Deadlock: Deadlock characterization | 2 | |
| 13 | Deadlock prevention and avoidance | 1 | |
| 14 | Deadlock detection and recovery, practical considerations. | 2 | |
| 15 | Concurrent Processes: Critical section problem, Semaphores | 1 | |
| 16 | Classical process coordination, problems and their solutions | 2 | |
| 17 | Interprocess communication, Multithreading. | 1 | |
| Unit IV | | | |
| 18 | Case Studies: DOS: Study of DOS with reference to storage management | 1 | |
| 19 | Device management | 2 | |

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| 20 | File system, Interrupt mechanism. | 2 | |
| 21 | UNIX: Study of UNIX with reference to storage management | 1 | |
| 22 | File system, Concurrency control, CPU scheduling. | 1 | |
| Total | | 36 | |

Reference Books:

1. Lewis & Papadimitriou: Elements of the Theory of Computation. PHI.
2. Daniel I.A. Cohen: Introduction to Computer Theory: John Wiley.

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SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (6th Semester)

Course No : CSE-302N

Course Title : **Compiler Design**

Name of Teacher: Er. SRISHTY

L T P/D TOTAL

3 1 - 04

Sessional: 25 Marks

Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Analysis of the source program, Phases of a compiler, Cousins of the Compiler, Grouping of Phases, Compiler construction tools. | 3 | |
| 2 | Lexical Analysis –Regular Expression, Introduction to Finite Automata and Regular Expression, | 3 | |
| 3 | Conversion of Regular Expression to NFA, Role of Lexical Analyzer, Input Buffering, Specification of Tokens. | 3 | |
| Unit-II | | | |
| 4 | Role of the Parser, Writing Grammars, Symbol Table, Context-Free Grammars | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Top Down Parsing with or without Backtracking, Recursive Descent Parsing, | 3 | |
| 6 | Non-Recursive Descent Parsing,SLR Parser, Canonical LR Parser, LALR Parser. | 3 | |
| Unit -III | | | |
| 7 | Intermediate languages, Declarations, Assignment Statements, Boolean Expressions, Case Statements, DAG representation of Basic Blocks, | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | A simple Code generator from DAG, Issues in the design of code generator , | 3 | |

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| 9 | The target machine , Runtime Storage management,Error Handling- Type checking, | 3 | |
| Unit IV | | | |
| 10 | Principal Sources of Optimization, Optimization of Basic Blocks, Peephole Optimization, Introduction to Global Data Flow Analysis, | 3 | |
| 11 | Source Language issues, Storage Organization, Static Storage Management, | 3 | |
| 12 | Heap Storage management, Access to non-Local Names, Parameter Passing | 3 | |
| Total | | 36 | |

Reference Books:

- Allen I. Holub “Compiler Design in C”, Prentice Hall of India, 2003.
- C. N. Fischer and R. J. LeBlanc, “Crafting a compiler with C”, Benjamin Cummings, 2003

Name & Sign of Teacher

Head’s Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA
Lecture Plan (6th Semester)

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|---|---------------------|---|-----|-------|
| Course No : CSE-304N | L | T | P/D | TOTAL |
| Course Title : ESSENTIALS OF INFORMATION TECHNOLOGY | 3 | 1 | - | 04 |
| Name of Teacher: Er. EKTA | Sessional: 25 Marks | | | |
| | Theory: 75 Marks | | | |

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Problem Solving Techniques: Introduction to Problem Solving, Introduction to Algorithms and Flowchart | 3 | |
| 2 | Searching algorithms: Linear search, Binary search and Sorting algorithms: Insertion and Selection sort | 3 | |
| 3 | Basic Data Structures: Stack, and Linear Queue | 3 | |
| Unit-II | | | |
| 4 | Programming Basics: Identifiers, Variables, Data Types, Operators, Control Structures: Loop, If else, Nested If, Switch Statement, Arrays, Strings | 3 | |
| 5 | Object Oriented Concepts : Class & Object, Operator, Instance Variables & Methods, Access Specifiers | 2 | |
| Content for 2nd Sessional Test | | | |
| 6 | Reference Variables: This, Super | 1 | |
| 7 | Parameter Passing Techniques, Constructors, Static, and Command Line Arguments | 3 | |
| Unit -III | | | |
| 8 | Relationships: Inheritance, Types of Inheritance, Static Polymorphism | 3 | |
| Content for 3rd Sessional Test | | | |
| 9 | Method Overloading, Constructor Overloading, Method Overriding | 3 | |
| 10 | Abstract, Interface, Introduction to Packages | 3 | |
| Unit IV | | | |

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| 11 | RDBMS- Data Processing, Database Technology, Data Models, Data Independence, ER Modeling Concept | 3 | |
| 12 | ER-notations, Converting ER Diagram into Relational Schema, Definition of Keys: Primary key, Foreign key, Unique Key | 3 | |
| 13 | SQL: DDL Statements, DML Statements, DCL Statements, Joins, Sub queries, Views. | 3 | |
| | Total | 36 | |

Reference Books:

- Introduction to Java Programming, K. Somasundaram, 1st edition
- Fundamentals of Database Systems by Shamkant B. Navathe, Ramez Elmasri Published by Addison Wesley.

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (6th Semester)

Course No : CSE-306 N

Course Title : Mobile Computing

Name of Teacher: Er. GUNJAN

L T P/D TOTAL

3 1 - 04

Sessional: 25 Marks

Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Introduction, issues in mobile computing, overview of wireless telephony: cellular concept, Mobile computing Architecture, | 3 | |
| 2 | Design considerations for mobile computing, Mobile Computing through Internet, Making existing applications mobile enabled. | 3 | |
| 3 | GSM: air-interface, channel structure, location management: HLR-VLR, hierarchical, handoffs, channel allocation in Cellular systems, WCDMA, GPRS 3G, 4G. | 3 | |
| Unit-II | | | |
| 4 | Wireless Networking, Wireless LAN Overview: MAC issues, IEEE 802.11, Blue Tooth, Wireless multiple access protocols, | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | TCP over wireless, Wireless applications, data broadcasting, Mobile IP, | 3 | |
| 6 | WAP : Architecture, Traditional TCP, Classical TCP, improvements in WAP, WAP applications | 3 | |
| Unit -III | | | |
| 7 | Data management issues, data replication for mobile computers, adaptive clustering for | 3 | |

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| | mobile wireless networks, File system, Disconnected operations Mobile Agents computing, security and fault tolerance, transaction processing in mobile computing environment. | | |
| Content for 3rd Sessional Test | | | |
| 8 | Cloud Architecture model, Types of Clouds: Public Private & Hybrid Clouds, Resource management and scheduling, Clustering, | 3 | |
| 9 | Data Processing in Cloud: Introduction to Map Reduce for Simplified data processing on Large clusters. | 3 | |
| Unit IV | | | |
| 10 | Ad hoc networks, localization, MAC issues, Routing protocols, global state routing (GSR), Destination sequenced distance vector routing (DSDV), | 3 | |
| 11 | Dynamic source routing (DSR), Ad Hoc on demand distance vector routing (AODV), | 3 | |
| 12 | Temporary ordered routing algorithm (TORA), QoS in Ad Hoc Networks, applications. | 3 | |
| Total | | 36 | |

Reference Books:

- Rajkamal, Mobile Computing, 2/E Oxford University Press,2011.
- J. Schiller, Mobile Communications, Addison Wesley

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (6th Semester)

Course No : CSE-310 N

Course Title : Software Engineering

Name of Teacher: Er. VARSHA

L T P/D TOTAL

3 1 - 04

Sessional: 25 Marks

Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Introduction: Introduction to Software Engineering, Software Characteristics, Software Crisis, The Evolving role of Software, | 3 | |
| 2 | Software Development Life Cycle (SDLC) Models: Water Fall Model, Prototype Model, | 3 | |
| 3 | Spiral Model, Evolutionary Development Models, Iterative Enhancement Models, RAD, V Model. | 3 | |
| Unit-II | | | |
| 4 | Software Requirement Specification: Requirement Engineering Process: Elicitation, Analysis, Documentation, Review and Management of User Needs, Feasibility Study, | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Data Flow Diagrams, Decision Tables, SRS Document, IEEE Standard for SRS. Software Quality: Software Quality, Concept of Software Quality Assurance (SQA), | 3 | |
| 6 | SEI-CMM Model. Introduction to Software Risk Management and Software Configuration Management | 3 | |
| Unit -III | | | |

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| 7 | Software Design: Basic Concept of Software Design, Modularization, Design Structure Charts, Pseudo Codes, Flow Charts, Coupling and Cohesion. | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | Design Strategies: Function Oriented Design, Object Oriented Design, Top-Down and Bottom-Up Design. | 3 | |
| 9 | Software Measurement and Metrics: Various Size Oriented Measures: Halstead's Software Science, Function Point (FP) Based Measures, COCOMO, Cyclomatic Complexity Measures: Control Flow Graphs. | 3 | |
| Unit IV | | | |
| 10 | Software Construction: Software construction fundamentals, minimizing complexity, Top-Down and Bottom –Up programming, structured programming, Compliance with Design and Coding Standards | 3 | |
| 11 | Testing: Testing Objectives, Unit Testing, Integration Testing, system testing, Acceptance Testing, Regression Testing, Structural Testing, Functional Testing, debugging. | 3 | |
| 12 | Maintenance: key issues, Types of software Maintenance, Cost of Maintenance, Software Re-Engineering. | 3 | |
| Total | | 36 | |

Reference Books:

- R. S. Pressman, Software Engineering: A Practitioners Approach, McGraw Hill.
- K. K. Aggarwal and Yogesh Singh, Software Engineering, New Age International Publishers

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (6th Semester)

Course No : CSE-308 N
Course Title : Web Technology
Name of Teacher: Er. SHAIFALI

L T P/D TOTAL
3 1 - 04
Sessional: 25 Marks
Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|--|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Information Architecture: The role of Information Architect, Collaboration and communication, Organizing information, organizational challenges, Organizing web sites and Intranets, Creating cohesive organization systems, designing navigation systems, types of navigation systems | 3 | |
| 2 | Integrated navigation elements, designing elegant navigation systems, Searching systems, Searching your web site, designing the search interface, Indexing the right stuff, | 3 | |
| 3 | To search or not to search grouping content, conceptual design, High level Architecture Blueprint. Architectural Page Mockups, Design Sketches. | 3 | |
| Unit-II | | | |
| 4 | Introduction to XHTML and HTML5: Origins and Evolution of HTML and XHTML, Basic Syntax, Standard XHTML Document Structure, Basic Text Markup, Images, Hypertext Links, | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Lists, Tables, Forms, HTML5, Syntactic Differences between HTML and XHTML. Cascading Style Sheets: Introduction, Levels | 3 | |

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| | of Style Sheets, Style Specification Formats, Selector Forms, | | |
| 6 | Property Value Forms, Font Properties, List Properties, Color, Alignment of Text, Box Model, Background Images, Conflict Resolution. | 3 | |
| Unit -III | | | |
| 7 | Java Script: Overview of JavaScript, Object Orientation and JavaScript, General Syntactic Characteristics, Primitives, Operations, and Expressions, | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | Screen Output and Keyboard Input, Control Statements, Object Creation and Modification, Arrays, Functions, Constructors, | 3 | |
| 9 | Pattern Matching Using Regular Expressions, Errors in Scripts | 3 | |
| Unit IV | | | |
| 10 | Python: Introduction to Python, Data Types and Expressions, | 3 | |
| 11 | Control Statements, Strings and Text Files, Lists and Dictionaries, | 3 | |
| 12 | Design with Functions, Design with Classes | 3 | |
| Total | | 36 | |

Reference Books:

- Robert W. Sebesta, "Programming The World Wide Web", Eight Edition, Pearson India, 2015
- Kenneth A. Lambert, "The Fundamentals of Python: First Programs", 2011, Cengage Learning

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (8th Semester)

Course No : CSE-446

Course Title : EXPERT SYSTEM

Name of Teacher: Er. ANUJ MEHTA

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| L | T | P/D | TOTAL |
| 3 | 1 | - | 04 |

Sessional: 50 Marks

Theory: 75 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|---|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Features of expert system, Representation and organization of knowledge | 3 | |
| 2 | Basics characteristics, types of problems handled by expert systems, | 3 | |

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| 3 | Case study of PROSPECTOR. | 3 | |
| | Unit-II | | |
| 4 | Expert System Tools: Techniques of knowledge representations in expert systems, | 3 | |
| Content for 2nd Sessional Test | | | |
| 5 | Knowledge engineering, System-building aids, | 3 | |
| 6 | support facilities, stages in the development of expert system. | 3 | |
| | Unit -III | | |
| 7 | Building an Expert System | 3 | |
| Content for 3rd Sessional Test | | | |
| 8 | Expert system development, Selection of tool, | 3 | |
| 9 | Acquiring Knowledge, Building process. | 3 | |
| | Unit IV | | |
| 10 | Problems with Expert Systems: | 3 | |
| 11 | Difficulties, common pitfalls in planning, | 3 | |
| 12 | dealing with domain expert, difficulties during development. | 3 | |
| | Total | 36 | |

Reference Books:

- Waterman D.A.: A Guide to Expert Systems, Addison Wesley Longman
- Hayes-Roth, Lenat and Waterman: Building Expert Systems, Addison Wesley

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA
Lecture Plan (8th Semester)

Course No : CSE-404

Course Title : Interactive Computer Graphics

Name of Teacher: Er. VARSHA

L T P/D TOTAL

4 1 - 05

Sessional: 25 Marks

Theory: 100 Marks

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
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| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Display Devices: Line and point plotting systems: Raster, Vector, pixel and point plotters, Continual refresh and storage displays, Digital frame buffer, Plasma panel display, | 4 | |
| 2 | Very high resolution devices. High-speed | 4 | |

| | | | |
|--|---|-----------|--|
| | drawing. Display processors. Character generators, Colour Display techniques (shadowmask and penetration CRT) | | |
| 3 | colour look-up tables, analog false colours, hard copy colour printers). | 4 | |
| | Unit-II | | |
| 4 | Display Description:Screen co-ordinates, user co-ordinates, Graphical data structures (compressed incremental list, vector list, use of homogeneous coordinates); | 4 | |
| Content for 2nd Sessional Test | | | |
| 5 | Display code generation Graphical functions: the view algorithm. | 4 | |
| 6 | Two-dimensional transformation, Line drawing. Circle drawing algorithms. | 4 | |
| | Unit -III | | |
| 7 | Interactive graphics:Pointing and positing devices (cursor, lightpen, digitizing tablet, the mouse, track balls). Interactive graphical techniques. | 4 | |
| Content for 3rd Sessional Test | | | |
| 8 | Positioning (Elastic or Rubber Bank lines, Linking, zooming, | 4 | |
| 9 | panning clipping, windowing, scissoring). Mouse Programming. | 4 | |
| | Unit IV | | |
| 10 | 3-D Graphics: Wire-frame, perspective display, Perspective depth, projective transformations, Hidden line and surface elimination. Transparent solids, shading | 4 | |
| 11 | Two dimensional Transformations. 3-dimesional | 4 | |
| 12 | Transformations. Interactive Graphical Techniques GUI. | 4 | |
| | Total | 48 | |

Reference Books:

- Giloi, W.K., Interactive Computer Graphics, Prentice Hall
- Newman, W., Sproul, R.F., Principles of Interactive Computer Graphics, McGraw Hill.

Name & Sign of Teacher

Head's Signature with Date

SHRI KRISHAN INSTITUTE OF ENGINEERING & TECHNOLOGY, KURUKSHETRA

Lecture Plan (8th Semester)

Course No : CSE-402

Course Title : Neural Networks & Fuzzy Logic

Name of Teacher: Er. SHAIFALI

| | | | |
|----------------------------|----------|------------|--------------|
| L | T | P/D | TOTAL |
| 4 | 1 | - | 05 |
| Sessional: 50 Marks | | | |
| Theory: 100 Marks | | | |

| Sr. No. | Topic | No. of Lectures Planned | No. of Lectures Delivered |
|--|---|-------------------------|---------------------------|
| Content for 1st Sessional Test | | | |
| UNIT 1 | | | |
| 1 | Concepts of neural networks, Characteristics of Neural Networks, Historical Perspective, and Applications of Neural Networks. | 4 | |

| | | | |
|--|---|-----------|--|
| 2 | Fundamentals of Neural Networks:The biological prototype, Neuron concept, Single layer Neural Networks, Multi-Layer Neural Networks, terminology, Notation and representation of Neural Networks, Training of Artificial Neural Networks. | 4 | |
| 3 | Representation of perceptron and issues, perceptron learning and training, Classification, linear Separability | 4 | |
| | Unit-II | | |
| 4 | Hopfield nets:Structure, training, and applications, Stability | 4 | |
| Content for 2nd Sessional Test | | | |
| 5 | Back propagation:Concept, Applications, and Back Propagation Training Algorithms. | 4 | |
| 6 | Counter Propagation Networks: Kohonan Network, Grossberg Layer & Training, applications of counter propagation, Image classification. | 4 | |
| | Unit -III | | |
| 7 | Bi-directional Associative Memories:Structure, retrieving a stored association, encoding associations, memory capacity. | 4 | |
| Content for 3rd Sessional Test | | | |
| 8 | ART: ART architecture, ART classification operation, | 4 | |
| 9 | ART implementation, and characteristics of ART. Image Compression Using ART | 4 | |
| | Unit IV | | |
| 10 | Optical Neural Networks:Vector Matrix Multipliers, Hop field net using Electro optical matrix multipliers, Holographic correlator, Optical Hopfield net using Volume Holograms. | 4 | |
| 11 | The Cognitrons and Neocognitrons:Their structure and training. Genetic Algorithms:Elements | 4 | |
| 12 | a simple genetic algorithm, working of genetic algorithms evolving neural networks. | 4 | |
| | | | |
| | Total | 48 | |

Reference Books:

- Li Min Fu, " Neural Networks in Computer Intelligence", McGraw-Hill, Inc.
- Philip D. Wasserman, "Neural Computing Theory and Practice", ANZA Research Inc.

Name & Sign of Teacher

Head's Signature with Date

