UNIT-1
Introduction to building blocks of electronic commerce: Internet and networking. Technologies, IP addressing, ARP, RARP, BOOTP, DHCP, ICMP, DNS, TFTP, TELNET.

Unit-2
Static and dynamic web pages, tiers, plug-ins, frames and forms. Exposure to Markup languages, HTML, DHTML, VRML, SGML, XML etc. CGI, Applets & Serve-lets, JSP & JAVA Beans, active X control, ASP cookies creating and reading cookies, semantic web, semantic web service ontology Comparative case study of Microsoft and JAVA technologies, web server scalability, Distributed objects, object request brokers, component technology, Web services, Web application architectures, Browsers, Search engines.

Unit-3

Unit-4
Internet payment system: Characteristics of payment system, 4C payments methods, SET Protocol for credit card payment, E-cash, E-check, Micro payment system, Overview of smart card, overview of Mondex. E-Governance: E-Governance architecture, Public private partnership, Readiness, Security, Cyber Crime and Law, IT Act

Unit-5

References:
1. Web Technology, Achyut Godbole, Atul Kahate, TMH
4. Satyanarayana, E-Government, PHI
7. Charles Trepper, E Commerce Strategies, Microsoft Press


Unit 3. Error Control Coding: Channel Coding: Linear Block Codes: Introduction, Matrix description, Decoding, Equivalent codes, Parity check matrix, Syndrome decoding, Perfect codes Hamming Codes, Optimal linear codes, Maximum distance separable (MDS) codes. Cyclic Codes: Introduction, generation, Polynomials, division algorithm, Matrix description of cyclic codes, burst error correction, Fire Codes, Golay Codes, and CRC Codes. BCH Codes: Introduction, Primitive elements, Minimal polynomials, Generator Polynomials in terms of Minimal Polynomials, Decoding of BCH codes.


Unit 5. Advanced Coding Techniques: Reed-Solomon codes, space time codes, concatenated codes, turbo coding and LDPC codes (in details), Nested Codes, block (in Details), Convolutional channel coding: Introduction, Linear convolutional codes, Transfer function representation & distance properties, Decoding convolutional codes (Soft-decision MLSE, Hard-decision MLSE), The Viterbi algorithm for MLSE, Performance of convolutional code decoders, Soft & Hard decision decoding performance, Viterbi algorithm implementation issues: RSSE, trellis truncation, cost normalization, Sequential decoding: Stack, Fano, feedback decision decoding, Techniques for constructing more complex convolutional codes with both soft and hard decoding.

Text Books and References:
UNIT-1

DBMS Concept Introduction, Data Model, Entity & Attributes, Relationship, E-R Model, Relational Data Model, Domain Tuples, Attributes, Key, Schema, Integrity Constraints, Relational Algebra & Relational Calculus, Normalization & Normal Form.

Unit-2


Unit-3


Unit-4

Object-Oriented Databases Introduction, Concept of Object Oriented Database, Object Oriented Data Model(OODM), Object-Oriented DBMS(OODBMS), Object Data Management Group and Object-Oriented Languages. Object-Relational DBMS, ORDBMS Design, ORDBMS Query Language.

Unit-5


Data Mining : Data, Information and Knowledge Discovery, Data Mining Functionalities, Data Mining System categorization and its Issues. Data Processing, Data Reduction, Data Mining Statistics. Data Mining Techniques.

References:

1. C. J. Date: An Introduction to Database Systems , Addison-Wesley
2. Avi Silberschatz, Henry F. Korth ,S. Sudarshan ,Data Base System Concepts, TMH
3. Patrick O’Neil & Elizabeth O’Neil, Database Principles, Programming and Performance,
4. Morgan Kaufmann Hardcourt India
5. Gillenson, Fundamental of Data Base Management Sytem, Willey India
6. Ceri & Pelagatti, Distributed Databases Principles & Systems,TMH
7. Paulraj Ponniah, Data Ware Housing Fundamental, Willey India.
8. Jiawei Han, Data Mining Concept & Techniques, Elsevier Pub.
Unit-I

Overview of language processors, Elements of assembly level programming, Design of assembler, Macro definition, Design of Macro preprocessor, Relocating and linking concepts, Design of linker, Programming Environments.

Unit-II


Unit –III


Unit-IV


Unit-V


References:

1. Dhamdhere, Systems Programming and Operating systems, TMH
2. Keith Cooper, Engineering a Compiler, Elsevier Pub
3. Mak, Writing compilers and Interpreters, Wiley India
4. Singhal & Shivaratri, Advanced concepts in Operating Systems, TMH
5. Sinha, Distributed operating system, PHI

Unit II: Neural Network: Introduction, Biological neural network: Structure of a brain, Learning methodologies. Artificial Neural Network(ANN): Evolution of, Basic neuron modeling , Difference between ANN and human brain, characteristics, McCulloch-Pitts neuron models, Learning (Supervised & Unsupervised) and activation function, Architecture, Models, Hebbian learning , Single layer Perceptron, Perceptron learning, Winnow-Hoff/ Delta learning rule, winner take all , linear Separability, Multilayer Perceptron, Adaline, Madaline, different activation functions Back propagation network, derivation of EBPA, momentum, limitation, Applications of Neural network.

Unit III: Unsupervised learning in Neural Network: Counter propagation network, architecture, functioning & characteristics of counter Propagation network, Associative memory, hope field network and Bidirectional associative memory. Adaptive Resonance Theory: Architecture, classifications, Implementation and training. Introduction to Support Vector machine, architecture and algorithms, Introduction to Kohanan’s Self organization map, architecture and algorithms

Unit – IV Fuzzy systems: Introduction, Need, classical sets (crisp sets) and operations on classical sets Interval Arithmetics ,Fuzzy set theory and operations, Fuzzy set versus crisp set, Crisp relation & fuzzy relations, Membership functions, Fuzzy rule base system : fuzzy propositions, formation, decomposition & aggregation of fuzzy rules, fuzzy reasoning, fuzzy inference systems, fuzzy decision making & Applications of fuzzy logic, fuzzification and defuzzification. Fuzzy associative memory. Fuzzy Logic Theory, Modeling & Control Systems


References:-
1. S.N. Shivanandam, “Principle of soft computing”, Wiley India.
2. David Poole, Alan Mackworth “Computational Intelligence: A logical Approach” Oxford.
4. Eiben and Smith “Introduction to Evolutionary Computing” Springer
5. Janga Reddy Manne; "Swarm Intelligence and Evolutionary Computing”; Lap Lambert Academic Publishing
8. D.E. Goldberg “Genetic algorithms, optimization and machine learning” Addison Wesley