



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

Grading M.TECH.(Information Technology) Scheme of Examination w.e.f. 2016-17 Semester/Year :I/ I

S. No.	Subject Code	Subject Name	Maximum Marks Allotted						Hours/Week			Credit	Total Marks
			Theory			Practical			L	T	P		
			End Sem.	Mid Sem	Quiz, Assignment	End Sem	Lab work	Assignment / Quiz					
1	MTIT101	ADVANCED COMPUTER NETWORKING	100	30	20				3	1		4	150
2	MTIT102	ADV. COMPUTER GRAPHICS & MULTIMEDIA	100	30	20				3	1		4	150
3	MTIT103	INFORMATION SECURITY SYSTEM	100	30	20				3	1		4	150
4	MTIT104	ADV. DATA BASE MANAGEMENT SYSTEM	100	30	20				3	1		4	150
5	MTIT105	ELECTIVE I	100	30	20				3	1		4	150
6	MTIT106	COMPUTER GRAPHICS LAB				50	50				4	2	100
7	MTIT107	DBMS LAB				50	50				4	2	100
8	MTIT108	COMPREHENSIVE VIVA-I				50					4	2	50
TOTAL			500	150	100	150	100		15	5	12	26	1000

L: Lecture

T:Tutorial

P:Practical

MTIT105 ELECTIVE -II

MTIT105A INTERNET TECHNOLOGY

MTIT105B DATA MINING & WAREHOUSING

MTIT105C SOFTWARE TESTING & QUALITY ASSURANCE



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

Grading M.TECH.(Information Technology) Scheme of Examination w.e.f. 2016-17 Semester/Year :II/ I

S. No.	SUBJECT CODE	SUBJECT NAME	Maximum Marks Allotted						Hours/Week			Credit	Total Marks
			Theory			Practical			L	T	P		
			End Sem.	Mid Sem	Quiz, Assignment	End Sem	Lab work	Assignment / Quiz					
1	MTIT201	DISTRIBUTED COMPUTING	100	30	20				3	1		4	150
2	MTIT202	SOFT COMPUTING	100	30	20				3	1		4	150
3	MTIT203	MOBILE COMPUTING	100	30	20				3	1		4	150
4	MTIT204	OBJECT ORIENTED TECHNOLOGY	100	30	20				3	1		4	150
5	MTIT205	ELECTIVE II	100	30	20				3	1		4	150
6	MTIT206	SOFT COMPUTING LAB				50	50				4	2	100
7	MTIT207	OBJECT ORIENTED TECHNOLOGY LAB				50	50				4	2	100
8	MTIT208	COMPREHENSIVE VIVA-II				50					4	2	50
TOTAL			500	150	100	150	100		15	5	12	26	1000

L: Lecture

T:Tutorial

P:Practical

MTIT205 ELECTIVE-II

MTIT205A WEB ENGINEERING

MTIT205B ADVANCED COMPUTER ARCHITECTURE



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

Grading
M.TECH.(Information Technology)
Scheme of Examination w.e.f. 2016-17
Semester/Year: III / II

S. No.	SUBJECT CODE	SUBJECT NAME	Maximum Marks Allotted						Hours/Week			Credit	Total Marks
			Theory			Practical			L	T	P		
			End Sem.	Mid Sem	Quiz, Assignment	End Sem	Lab work	Assignment / Quiz					
1	MTIT301	DISSERTATION PART-I (LITERATURE REVIEW / PROBLEM FORMULATION/ SYNOPSIS)				100	100				24	12	200
TOTAL						100	100				24	12	200

L: Lecture

T:Tutorial

P:Practical



SARVEPALLI RADHAKRISHNAN UNIVERSITY, BHOPAL

Grading
M.TECH.(Information Technology)
Scheme of Examination w.e.f. 2016-17
Semester/Year: IV / II

S. No.	SUBJECT CODE	SUBJECT NAME	Maximum Marks Allotted						Hours/Week			Credit	Total Marks
			Theory			Practical			L	T	P		
			End Sem.	Mid Sem	Quiz, Assignment	End Sem	Lab work	Assignment / Quiz					
1	MTIT401	DISSERTATION PART-II				150	150				24	12	300
TOTAL						150	150				24	12	300

L: Lecture

T: Tutorial

P: Practical



MTIT-101 ADVANCED COMPUTER NETWORKING

UNIT 1

Review of Networking and O.S. Fundamentals, ISO-OSI Model, different layers and their functions, LAN, MAN, WAN, Communication media & principles IEEE standards etc.

UNIT 2

Internetworking with TCP/IP, Basic concepts, Principles, Protocols and Architecture, Address handling Internet protocols and protocol layering. DNS, Applications: TEL- NET, RLOGN , FTP, TFTP, NFS, SMTP, POPL, IMAP, MIME, HTTP,STTP,DHCP, VOIP, SNMP.

UNIT 3

Introduction to Router, Configuring a Router, Interior & Exterior Routing, RIP, Distance Vector Routing, OSPF, BGP, Uni-cast, Multicast and Broadcast. Multicast routing protocols: DVMRP, MOSPF, CBT, PIM, MBONE, EIGRP, CIDR, Multicast Trees, Comparative study of IPv6 and IPv4.

UNIT 4

VPN addressing and routing, VPN Host management, ATM Concepts, Services Architecture, Equipments and Implementation

UNIT 5

Introduction to wireless transmission and medium access control, wireless LAN: IEEE 802.11, Hiper LAN , Bluetooth Mobile Network and Transport layer, WAP GSM and CDMA: Network architecture and management

Reference Books:

1. Computer Networks: Tanenbaum.
2. Internetworking with TCP/IP: Comer.
3. Data Communications, Computer Networks and Open Systems: Hallsall.
4. Data Communications, Stalling.
5. Mobile Communication: Schiller, Pearson Education
6. Computer Communications and network Technology, Gallo, Cengage (Thomson)
7. Wireless and Mobile Network Architecture: Yi Bing Lin, Wiley
8. ATM Network: Kasara, TMH
9. TCP/IP protocol Suite, Forouzan ,TMH



MTIT - 102 ADVANCED COMPUTER GRAPHICS & MULTIMEDIA

Unit 1

Basics of Computer Graphics, Graphics display devices, Input devices; Raster Graphics: line and circle drawing algorithms Windowing and clipping: Cohen and Sutherland line clipping. Cyrus beck clipping method.

Unit 2

Computations on polygons: point inclusion problem, polygon filling, polygon intersection, clipping. 2D and 3D Geometrical Transformations: scaling, translation, rotation, reflection.

Unit 3

Viewing Transformations, parallel and perspective projection, curves and Surfaces: cubic splines, Bezier curves B-splines, Hidden line/surface removal methods; Rendering & Visualization, Illuminations model. Shading: Gouraud, Phong. Introduction to Raytracing.

Unit 4

Multimedia Components, Multimedia system designs an introduction compression & decompression data & file format standard. Multimedia input/output technologies.

Storage technologies, Multimedia authoring & user interface. Hyper media messaging. Distributed multimedia system

Reference Books:

1. Rogers D.F. Procedural Elements of Computer Graphics, McGraw Hill.
2. Hearn and Baker. Computer Graphics, Prentice-Hall of India, New Delhi
3. Foley, VanDam, Fundamentals of Interactive Computer Graphics, Addison-Wesley
4. Multimedia System Design- Prabhat K. andleigh and Kiran Thakrar, PHI
5. Shuman, Multimedia in action, Cengage (Thomson)



MTIT - 103 INFORMATION SECURITY SYSTEM

Unit 1

Introduction: Basic objectives of cryptography, secret-key and public-key cryptography, one-way and trapdoor one-way functions, cryptanalysis, attack models, classical cryptography. Block ciphers: Modes of operation, DES and its variants, RCS, IDEA, SAFER, FEAL, BlowFish, AES, linear and differential cryptanalysis. Stream ciphers: Stream ciphers based on linear feedback shift registers, SEAL, unconditional security.

Unit 2

Message digest: Properties of hash functions, MD2, MD5 and SHA-1, keyed hash functions, attacks on hash functions. Public-key parameters: Modular arithmetic, gcd, primality testing, Chinese remainder theorem, modular square roots, finite fields.

Unit 3

Intractable problems: Integer factorization problem, RSA problem, modular square root problem, discrete logarithm problem, Diffie-Hellman problem, known algorithms for solving the intractable problems.

Unit 4

Public-key encryption: RSA, Rabin and ElGamal schemes, side channel attacks. Key exchange: Diffie-Hellman and MQV algorithms. Digital signatures: RSA, DAS and NR signature schemes, blind and undeniable signatures. Entity authentication: Passwords, challenge-response algorithms, zero-knowledge protocols. Standards: IEEE, RSA and ISO standards

Unit 5

Network issues: Certification, public-key infrastructure (PKI), secured socket layer (SSL), Kerberos. Advanced topics: Elliptic and hyper-elliptic curve cryptography, number field sieve, lattices and their applications in cryptography, hidden monomial cryptosystems, cryptographically secure random number generators.

Reference Books:

1. William Stallings, Cryptography and Network Security, PHI
2. Atul Kahate, "Cryptography and Network Security", TMH
3. Calabrese, Info security intelligence-cryptography principles appl., Cengage Learn
4. Krawetz, Intro to network security, Cengage Learning.



MTIT - 104 ADVANCE DBMS

Unit 1

DBMS Concepts Introduction, Data models, Entities and attributes, Relationships, E-R diagram. Relational Data models: Domains, Tuples, Attributes, Keys, Relational database, Schemas, Integrity constraints. Relational algebra and relational calculus, Normalization, Normal forms.

Unit 2

Query Processing and Optimization. Distributed databases: Fragmentation, Replication, Location & Fragment transparency, Distributed Query Processing and Optimization.

Unit 3

Object oriented and object relational databases: Specialization, Generalization, Aggregation,

Unit 4

Association. Introduction to Image and Multimedia databases and data structures. Data structure- R tree, K d tree, Quad trees, Content based retrieval: Color Histograms.

Unit 5

Web databases: Accessing databases through web

Reference Books:

1. R. Elmasri, S. Navathe, Fundamentals of Database System, Benjamin Cummings
2. C.J. Date, An Introduction to Data base Systems, Volume I, Addison Wesley
3. H. F. Korth and A. Silberschatz. Database Concept, TMH
4. Object Oriented databases :Narang, Prentice-Hall of India, New Delhi
5. Rob, Database Systems, Cengage, (Thomson)
6. Pratt, Concepts of DBMS, Cengage.



MTIT - 105A INTERNET TECHNOLOGY

Unit 1

Protocols and architecture, Protocols, Characteristics, Functions, Need for multiple protocols, Conceptual layers of multiple protocol software, Protocol layering principles, Multiplexing and Demultiplexing.

Unit 2

Internet Protocol, Virtual network, Internet architecture and philosophy, Purpose of the internet protocol, Internet diagram, Routing in an internet, table driven IP internet, IP routing algorithm, Internet control message protocols (ICMP), Internet protocol version 6, Features, Format, Source routing, Options, address space assignment, User data gram protocol, Format of UDP messages, UDP encapsulation and protocol layering. Transmission control protocol, Need for stream delivery, Properties of reliable delivery service, Ports, Connections and pins, Window size and flow control - TCP segment format, Acknowledgement, Timeouts, Robustness, Establishing and clearing TCP connects.

Unit 3

Route discovery protocols, Core, peers, Gateway to gating algorithm (GGP), Routing, Autonomous system concepts, Exterior gateway protocol, Routing information protocol (RIP), The Hello protocol, Open shortest path first protocol (OSPF). Application layer protocols, TELNET protocols, File transfer protocols (FTP), Simple mail transfer protocol (SMTP), X-Window system protocol, Remote procedure call, Network file system, proof to point protocol.

Unit 4

General structure of a network management product, Information extraction and collection instruments, Monitoring principles, Instruments supporting physical network management, Line monitors, Data scopes, network monitors, Instruments supporting logical network management, Accounting packages, Application monitoring, Communication monitors, Security monitors, LAN monitors.

Configuration management, Configuration management functions, Inventory managements, Network topology services, Order processing and provisioning, Charge management directory services.

Unit 5

Fault management, Processes and procedure, Fault management functions, Performance management, Security management, accuracy management, Network capacity planning.

Reference Books:

1. Uylless Black, TCP/IP and related protocols, McGraw Hill.
2. Udupa, Network Management System Essentials, McGraw Hill.
3. DE. Comer, Internetworking with TCP/IP Vol. I, Principles, Protocol, Arch., PHI
4. Kernel Terplan, Communication Network management, PHI
5. TCP/IP Protocol Suite, Forouzan, TMH



MTIT – 105B DATA MINING AND WAREHOUSING

Introduction : Data Mining: Definitions, KDD v/s Data Mining, DBMS v/s Data Mining , DM techniques, Mining problems, Issues and Challenges in DM, DM Application areas.

Association Rules & Clustering Techniques: Introduction, Various association algorithms like A Priori, Partition, Pincer search etc., Generalized association rules. Clustering paradigms; Partitioning algorithms like K-Method, CLARA, CLARANS; Hierarchical clustering, DBSCAN, BIRCH, CURE; categorical clustering algorithms, STIRR, ROCK, CACTUS.

Other DM techniques & Web Mining: Application of Neural Network, AI, Fuzzy logic and Genetic algorithm, Decision tree in DM. Web Mining, Web content mining, Web structure Mining, Web Usage Mining.

Temporal and spatial DM: Temporal association rules, Sequence Mining, GSP, SPADE, SPIRIT, and WUM algorithms, Episode Discovery, Event prediction, Time series analysis.

Spatial Mining, Spatial Mining tasks, Spatial clustering, Spatial Trends.

Data Mining of Image and Video : A case study. Image and Video representation techniques, feature extraction, motion analysis, content based image and video retrieval, clustering and association paradigm, knowledge discovery.

The vicious cycle of Data mining, data mining methodology, measuring the effectiveness of data mining data mining techniques. Market baskets analysis, memory based reasoning, automatic cluster detection, link analysis, artificial neural networks, generic algorithms, data mining and corporate data warehouse, OLAP

Reference Books :

1. Data Mining Techniques ; Arun K.Pujari ; University Press.
2. Data Mining; Adriaans & Zantinge; Pearson education.
3. Mastering Data Mining; Berry Linoff; Wiley.
4. Data Mining; Dunham; Pearson education.
5. Text Mining Applications, Konchandy, Cengage



MTIT 105C SOFTWARE TESTING & QUALITY ASSURANCE

Introduction to software testing, concepts, issues and techniques, test activities, management and automation, Coverage and usage testing based on checklist, input domain partitioning and boundary testing, object oriented testing: testing OOA and OOD models, object oriented testing strategies, test case design for OO software, testing methods applicable at the class level, interclass test case design, Web application testing, debugging, security & reliability.

Programming style and program quality: simple style rules, comment statements, program quality, quantifying program quality, Software quality and quality Assurance: Principle of Software Quality Assurance (SQA), Applying SQA to software project, proven factors for SQA success, SQA during software requirements, SQA during software design phase, SQA during software code and test, Advance quality engineering topics.

Human factors in software engineering: Human factors history, HCL requirements and design process, HCL testing.

Reference Books:

1. Ali Behforooz and Frederick J. Hudson, Software Engineering Fundamentals, Oxford University Press
2. JeffTain, Software Quality Engineering: Testing, Quality Assurance and Quantifiable improvement, Willy Pub.
3. Aditya Mathur, Foundation of Software Testing 1/e, Pearson Education
4. Paul C. Jorgensen, Software Testing, A Craftsman's Approach, Second Edition, CRC Press



MTIT - 201 Distributed Computing

Unit 1

INTRODUCTION: Characterization of Distributed Systems - Examples - Resource Sharing and the Web -Challenges - System Models - Architectural and Fundamental Models - Networking and Internetworking - Types of Networks - Network Principles - Internet Protocols – Case Studies.

Unit 2

PROCESSES AND DISTRIBUTED OBJECTS : Interprocess Communication - The API for the Internet Protocols - External Data Representation and Marshalling - Client-Server Communication - Group Communication - Case Study - Distributed Objects and Remote Invocation - Communication Between Distributed Objects - Remote Procedure Call - Events and Notifications - Java RMI - Case Study.

Unit 3.

OPERATING SYSTEM ISSUES – I :The OS Layer - Protection - Processes and Threads - Communication and Invocation – OS Architecture - Security - Overview - Cryptographic Algorithms - Digital Signatures - Cryptography Pragmatics - Case Studies - Distributed File Systems - File Service Architecture - Sun Network File System - The Andrew File System

Unit 4.

OPERATING SYSTEM ISSUES – II: Name Services -Domain Name System - Directory and Discovery Services - Global Name Service - X.500 Directory Service - Clocks, Events and Process States - Synchronizing Physical Clocks - Logical Time And Logical Clocks - Global States - Distributed Debugging - Distributed Mutual Exclusion – Elections – Multicast Communication Related Problems.

Unit 5.

DISTRIBUTED TRANSACTION PROCESSING :Transactions - Nested Transactions - Locks - Optimistic Concurrency Control - Timestamp Ordering - Comparison - Flat and Nested Distributed Transactions – Atomic Commit Protocols - Concurrency Control in Distributed Transactions – Distributed Deadlocks - Transaction Recovery - Overview of Replication And Distributed Multimedia Systems.

Reference Books:

1. G Coulouris, J Dollimore, T Kindberg, Distributed Sys Concept- Design, Pearson
2. Sape Mullender, Distributed Systems, Addison Wesley,
3. A Fleishman, Distributed Systems- Software Design and Implementation, S Verlag
4. M.L.Liu, Distributed Computing Principles and Applications, Pearson Education
5. AS Tanenbaum, Maartenvan, ,Distributed System Principles Paradigms, Pearson
6. M Singhal, Niranjana, Shivaratri, Advanced Concept in Operating System, TMH
7. Flynn, Understanding Operating System, Cengage (Thomson)



MTIT - 202 SOFT COMPUTING

UNIT-I

INTRODUCTION: production systems, Study and comparison of breadth first search and depth first search. Techniques, other Search Techniques like hill Climbing, Best first search. A* algorithm, AO* algorithms. Knowledge Representation, Problems in representing knowledge, knowledge representation using propositional and predicate logic, Resolution, Refutation, theorem proving, monotonic and no-monotonic reasoning.

UNIT-II

ARTIFICIAL NEURAL NETWORKS : Basic concepts - Importance of tolerance of imprecision and uncertainty. Biological and artificial neuron, Single layer perception - Multilayer Perception - Supervised and Unsupervised learning – Back propagation networks - Kohnen's self organizing networks - Hopfield network.

UNIT-III

FUZZY SYSTEMS : Introduction, History of the Development of Fuzzy Logic, Fuzzy sets and Fuzzy reasoning - Fuzzy matrices - Fuzzy functions - Decomposition - Fuzzy automata and languages - Fuzzy control methods - Fuzzy decision making.

UNIT-IV

NEURO - FUZZY MODELING : Adaptive networks based Fuzzy interface systems - Classification and Regression Trees - Data clustering algorithms - Rule based structure identification - Neuro-Fuzzy controls - Simulated annealing – Evolutionary computation.

UNIT-V

GENETIC ALGORITHMS: Survival of the Fittest - Fitness Computations - Cross over - Mutation - Reproduction - Rank method - Rank space method.

Reference Books :

1. Rajsekaran & Pai – Neural Networks, fuzzylogic & Genetic algorithms, PHI
2. Rich E and Knight K, Artificial Intelligence, TMH, New Delhi.
3. Hagan, Dernuth & Beale, Neural network design, Thomson learning, VP.
4. Philip D. Wasserman, Neural Computing, Van Nostrand Reinhold Pub.
5. Kecman: Learning & soft Computing, Pearson Edu.



MTIT - 203 MOBILE COMPUTING

UNIT 1

Introduction to cellular mobile systems: Basic cellular system, performance, criteria, Uniqueness of mobile Radio environment, operation of cellular systems, marketing Image of Hexagonal shaped cells, Planning of cellular system, Analog cellular systems, digital cellular systems, cell splitting.

UNIT 2

Cell coverage for signal & Traffic: Introduction, obtaining the mobile point to point model, Propagation over water or flat open areas, Foliage loss, Propagation in near in distance, long distance Propagation obtain path less from a point to point Prediction model, call-site antenna Heights & Signal coverage calls, mobile to mobile Propagation.

UNIT 3

Co channel Interference reduction: Co channel interference , exploring co channel interference area, in a system, Real time co channel interference measurement at mobile radio Transceivers, Decision of an omni directional antenna system, Design of a directional antenna system,. Lowering the antenna height, reduction of co channel interference by mean of a nontech in the tilted antenna Pattern, Power control.

UNIT 4

Frequency management & channel Assignment: Frequency management, Frequency- spectrum utilization, set up channels definition of channel assignment, fixed channel assignment, non fixed channel assignment algorithms How to operate north additional spectrum, Traffic & channel assignment, Perception of call blocking from the subscribers.

UNIT 5

Handoffs & Dropped calls: Value of Implementing Handoffs, initiation of a hand off, Delaying handoff, Forced Handoffs, Queuing of Handoffs, power difference handoff , Mobile assisted handoff & soft Handoff, call site Handoff only, intersystem Handoff, introduction to dropped call rate, Formula of Dropped call rate, Finding the values of g &

UNIT 6

Special topics: Wireless and Mobile Computation – SS7, GSM, CDMA, Mobile IP, Wireless Mobile ATM, Multicast Routing Protocols, Location Management, Mobile Agents, Mobility Management.

Reference Books:

1. J. Schiller, Mobile Communication, Pearson Press.
2. Wireless Network, Kaveh Pahalwan
3. Adhoc Networking by Charles E. Perkins, Addison Wisely
4. Mobile cellular Telecommunications by William C.Y. Lee TMH



MTIT - 204 OBJECT ORIENTED TECHNOLOGY

Unit 1

Review of programming practices and code-reuse; Object model and object-oriented concepts.

Unit 2

Object-oriented programming languages and implementation; Object-oriented analyses and design using UML structural, behavioral and architectural modeling.

Unit3

Unified development process, Software reuse design patterns, components and framework; Distributed object computing, interoperability and middleware standards COM/DCOM and CORBA.

Unit4

Object-oriented database system data model, object definition and query language, object-relational system.

Reference Books:

1. Object Oriented Modelling and Design, Booch Rambaugh, PHI
2. Analysis & Design, Atul Kahate, TMH
3. Satzinger, Object Oriented Analysis and Design, Cengage Learn (Thomson)
4. Johnson, An Introduction to JAVA programming and OOAD, Cengage.



MTIT 205A WEB ENGINEERING

UNIT 1

Introduction: layering, DNS - encapsulation, de-multiplexing, client /server model, port numbers, standardization process, the Internet. Link layer: introduction, Ethernet and IEEE 802 encapsulation, trailer encapsulation, SLIP, PPP- Loop back interface, MTU. Internet protocol: introduction, IP header, IP routing, subnet addressing, subnet Mask special case of IP addresses, a subnet example.

UNIT 2

Address Resolution Protocol: Introduction, an example, ARP cache, ARP packet format, ARP examples, Proxy ARP, ARP command. RARP: Introduction, RARP packet format, RARP examples, RARP server design. ICMP: Introduction, ICMP message types, ICMP address mask request and reply-ICMP timestamp request and reply-4.4 BSD processing of ICMP Messages.

UNIT 3

Ping Program: Introduction, ping program, IP record route option, IP time stamp option. Trace route program: Introduction, trace route program operation, LAN output, and WAN output- IP source routing option. IP routing: Introduction, routing principles, ICMP host, and ICMP redirect errors. Dynamic Routing protocols: introduction, dynamic routing, RIP-OSPF, BGP, CIDR.

UNIT 4

UDP: introduction, UDP header, UDP checksum, IP Fragmentation, UDP Server design. DNS Introduction-basics, message format, simple example, pointer quires, resource records, caching, UDP. TFTP: introduction, protocol, security. BOOTP: introduction, packet format, server design, through router.

UNIT 5

TCP: Introduction, services, headers, connection establishment and termination, timeout of connection establishment- maximum segment size- half, close, state transition diagram, reset segments, simultaneous open and close- options, server design.

SNMP Introduction, protocol, structure of management information, object identifiers, management information base, instance identification. Telnet: rlogin protocols, examples, telnet protocol and examples. FTP, protocol, examples, SMTP protocols, examples, NFS, TCP/IP Applications.

Reference Books :

1. W. Richard Stevens, TCP/IP Illustrated Volume-I "The Protocols ", Addison W 2
2. Jaiswal .S, TCP/IP Principles, Architecture, Protocols And Implementation, First Edition, Galgotia Publications Pvt Ltd.



MTIT 205B ADVANCE COMPUTER ARCHITECTURE

UNIT 1

Flynn's and Handler's Classification of parallel computing structures. Pipelined and Vector Processors.

UNIT 2

Data and control hazards and method to resolve them. SIMD multiprocessor structures.

UNIT 3

Interconnection networks. Parallel Algorithms for array processors, Search algorithms, MIMD multiprocessor systems,

UNIT 4

Scheduling and load balancing in multiprocessor systems, Multiprocessing control a algorithms.

Reference Books:

1. Advance Computer Architecture, parthsarthy, Cengage (Thomson)
2. Computer Architecture and Organisation- John Hays, Mc.Graw-Hill.
3. Computer Architecture and Parallel Processing- Hwang And Briggs, TMH.