DEVI AHILYA VISHWAVIDYALAYA, INDORE

FACULTY OF ENGINEERING

SCHEME OF EXAMINATION
&
COURSE OF CONTENTS

BE III Year Programme
(INFORMATION TECHNOLOGY)

INSTITUTE OF ENGINEERING & TECHNOLOGY
(www.iet.dauniv.ac.in)

Scheme for B.E. III (Information Technology) effective from June 2008

DEVI AHILYA VISHWAVIDYALAYA, INDORE
INSTITUTE OF ENGINEERING & TECHNOLOGY

SCHEMES OF EXAMINATION FOR BE PROGRAMME
(Subject to Revision)

B. E. III YEAR INFORMATION TECHNOLOGY
Th- Theory, CW – Class Work, SW – Sessional Work, Pr – Practical

Semester V

					Maximum Marks				
SNo	Sub Code	Subject	L	P	Th	CW	SW	Pr	TOTAL
1.	3IT401	Theory of Computation	4	-	100	50	-	-	150
2.	3IT402	Operating System	4	2	100	50	50	50	250
3.	3IT403	Computer Network	4	2	100	50	50	50	250
4.	3IT404	Database Management System	4	2	100	50	50	50	250
5.	3IT405	Software Engineering	4	2	100	50	50	50	250
6.	3SS456	Entrepreneurship Development & IPR	2	-	-	50	-	-	50
	TOTAL		**22**	**8**	**500**	**300**	**200**	**200**	**1200**

Semester VI

					Maximum Marks				
SNo	Sub Code	Subject	L	P	Th	CW	SW	Pr	TOTAL
1	3IT451	Project - I		2			100	50	150
2	3IT452	Analysis of Algorithms	4	2	100	50	50	50	250
3	3IT453	Server Side Programming	4	2	100	50	50	50	250
4	3IT454	Web Engineering	4	-	100	50	-	-	150
5	3ET455	Digital Communication Engineering	4	2	100	50	50	50	250
6	3IT456	Software Workshop	-	2	-	-	50	50	100
7	3SS406	Principles of Management	2	-	-	50	-	-	50
	TOTAL		**18**	**10**	**400**	**250**	**300**	**250**	**1200**

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT401 Theory of Computation	L	T	P		TH	CW	SW	PR	Total
	4	0	0	Max	100	50	-	-	150
Duration of Theory Paper: **3 Hours**				Min	35	25	-	-	60

Course Objectives: - To familiarize students about theoretical & mathematical aspects of computer science and making their problem solving thinking stronger.

Prerequisite: Discrete Structures, Applied Mathematics.

Course of Content

UNIT I
Introduction to Formal Languages, Grammar and Automata; Finite State Machines- DFA & NDFA; Regular Expressions; Properties of Regular Languages; Pumping Lemma.

UNIT II
Chomsky's Hierarchy; Context Free Languages & Grammars; Recognition, Translation and Parsing; Normal Forms of CFG; CKY Algorithm. Pushdown Automata; PDA and CFG; Nondeterministic PDA, Properties of CFLs; Pumping Lemmas;

UNIT III
Turing Machines (TMs)- TM as Language Acceptor, Transducer and Problem Solver. Multitape TMs, Nondetermimistic TMs, Universal TMs, Turing Computable functions.

UNIT IV
Predicate Calculus- Syntax and Wffs; Models of Interpretation and Semantics- Horn and Ground Clauses; Resolution Techniques.

UNIT V
Context-Sensitive grammars and Linear Bounded Automata (LBAs). Petri nets and its Applications. Computational Complexity, Unsolvable problems, Complexity of Computing using HLL programs and Automata models.

BOOKS RECOMMENDED:
[1] D Mandriolli, C Ghezzi, Theoretical Foundation of Computer Science, John Wiley, 1987.
[2] Zohar Manna, Mathematical Theory of Computation, McGraw Hill, 1977.
[3] Cohen, Introduction to Computer Theory, John Wiley, 1990.
[4] Moll, Arbib, Kfoury, Introduction to Formal Language Theory, Springer Verlog,1990.
[5] P Linz, An Introduction to Formal languages and Automata, 3/e, Narosa Pub. 2003.
[6] J. Martin, Introduction to Languages and the Theory of Computation, 3/e, Tata McGraw Hill, 2005.
[7] J.Hopcroft and J.D. Ullmam. " Introduction to Languages, Automata and Computation Addition Wesley, 1981.
[8] Lewis and Papadmitrou, "Element of Theory of Computation," Printice Hall, 1981.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT402 **Operating System**	**L**	**T**	**P**		**TH**	**CW**	**SW**	**PR**	**Total**
	4	0	2	Max	100	50	50	50	250
Duration of Theory Paper: **3 Hours**				Min	35	25	25	25	110

Objective: To study Operating System concepts and its design issues.
Prerequisite: Computer Organization.

COURSE OF CONTENT

Unit I
Introduction
Role of OS: Types of OS, Batch Systems; Multiprogramming; Time Sharing; Distributed & Real time OS. Computer structure and OS: System Architecture – I/O, Storage, Processors; System components- OS Services, System Calls , System Programs; System Design, Implementation and Generation.

Unit II
Process Management
Concepts of process: Process status, Process description, Process model. Process Scheduling: Concepts, Scheduler organization, preemptive and non- preemptive scheduler strategies, scheduling algorithms: FCFS, SJN, Priority Scheduling, Round Robin Scheduling, Multiple Processor scheduling, Thread Concepts and Multiple threaded OS.

Unit III
Process Synchronization and Deadlock
Process Co-operation, Concepts of Interprocess communication, Process Synchronization, Synchronization Issues, Critical Section problem, Mutual exclusion Primitives and Algorithms, Process Synchronization with semaphores. Concepts of Deadlock, Conditions for Deadlocks, Resource Concepts & Abstractions, Deadlock Prevention, Avoidance and Recovery, Banker Algorithms for Deadlock Avoidance.

Unit IV
Memory Management
Swapping, Segmentation, Paging and Contiguous memory allocation. Virtual Memory: Demand Paging, Page replacement and Frame Allocation policies, Thrashing. File System: Concepts, Access Method, Directory Structure, and File System Management.

Unit V
I/O management and other issues
Kernel, I/O hardware, I/O interfacing, I/O requesting and interrupts. Disk management: Disk Structure and Scheduling. Protection and Security. Linux: Kernel Organization, Process and resource management, Memory management, Introduction to Linux File System. Overview of Windows Operating System design.

Books recommended:
[1]. Silberschatz, Galvin and Gagne, **Operating System Principles**, 7th Ed. Addison Wesley.
[2]. Gary Nutt, **Operating Systems**, 3rd Ed. Pearson Education, India
[3]. Tanenbaum, **Modern Operating Systems**, PHI.
[4]. W. Stalling, **Operating Systems**, Macmillan.
[5]. H. M. Dietel , **Operating Systems**, Addison Wesley Longman.
[6]. Maurice J. Bach, **The design of Unix Operating system**, Pearson Education, India.
[7]. Sumitabha Das, **Unix Concepts & Applications: includes SCO Unix & Linux**, Tata McGraw Hill.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT403 **Computer Networks**	**L**	**T**	**P**		**TH**	**CW**	**SW**	**PR**	**Total**
	4	0	2	Max	100	50	50	50	250
Duration of Theory Paper: **3 Hours**				Min	35	25	25	25	110

Objective: To learn basics of Computer Networks and its design issues.
Prerequisite: Communication System basics.

COURSE OF CONTENT
Unit I
Introduction
Computer Network-Definition, Goals, Design Issues, Network architecture-Broadcast & Point to Point, Models-OSI reference & TCP/IP and their comparative study, Network classification-LAN,WAN & MAN, protocols & services types of service-connection oriented and connection less, Transmission Media **:** Twisted pair, Coaxial cable, Fiber optic cable, Wire less transmission, Telephone System, Multiplexing, Switching: Circuit, Packet & Message Switching. Network Devices: Repeater, Bridge, Router, Gateways, NIC, Cabling System.

Unit II
Data Link Layer Design and Protocols
Framing, Error control-Bit Error**:** causes of error, control methods, Flow control – Stop & Wait, Sliding Window Protocols, MAC Protocols: Aloha, CSMA, CSMA/CD, Collision free protocols, IEEE 802.3 standard, Fast Ethernet, Gigabit Ethernet, Overview of Wireless LANs: IEEE 802.11 standard.

Unit III
Network Layer Design and Protocols
Internetworking: Concepts and Architecture. Routing: different routing algorithms, Congestion Control, Addressing- IP Addressing and subnet masking, CIDR , IPv6, IP protocol and other supporting protocols at IP layer: ARP, RARP, ICMP.

Unit IV
Transport Layer Design and Protocols
Transport layer addressing, Connection Establishment and release, Buffering, Multiplexing, Crash Recovery, TCP/IP suit of Protocols –TCP & UDP, TCP: Protocol, Segment header, transmission policy.

Unit V
Application Layer and Other Issues
Domain Name System, File Transfer Protocol, Telnet, Email: Architecture and services, HTTP, NAT, Firewall and Proxy, Network performance issues and QOS, Overview of network security.

Books Recommended:
[1] Computer Network by A.S. Tanenbaum, 4th Ed Pearson Education,2007
[2] An Engineering Approach to Computer network by S. Keshav, Pearson Education
[3] Data and computer communication by William Stalling 5TH Ed PHI, 1996.
[4] Internetworking with TCP/IP Vol. I by D.E.Comer, 5th Pearson Education
[5] Data Communication and Networking by Forouzan, 4th Ed Tata McGraw Hills

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT404 **Database Management System**	**L**	**T**	**P**		**TH**	**CW**	**SW**	**PR**	**Total**
	4	0	2	Max	100	50	50	50	250
Duration of Theory Paper: **3 Hours**				Min	35	25	25	25	110

Objective: To gain the knowledge of Database Management System design and familiarize with database application development.
Prerequisite: Data Structures.

COURSE OF CONTENT

Unit I
Introduction to DBMS
Database Environment: Basic Concepts, Advantages of Database approach, Comparison with Traditional file systems, DBMS Architecture, Database Users, Data Models and Schemas, Database languages and Interfaces; Database development process: Development Lifecycle, Types of Application.

Unit II
Database Analysis
Introduction to Data Modeling, Modeling the rules, Entity Relationship Model, ER Model Constructs-Attributes, Relationship etc., Enhanced ER Model and Business Rules, Modeling Enhanced relationships – Specialization and Generalization, Union Types. Binary and Ternary relationship Issues.

Unit III
Database Design
Introduction to Logical Database Design, Relational Data Model – Codd's Rules, Relational Algebra etc. ;Integrity Constraints, Transforming ER diagrams into relations, Functional Dependencies, Normalization – 1NF, 2NF, 3NF, BCNF and 4NF etc.

Unit IV
System Implementation
Introduction to SQL – Inserting , Updating, and Deleting data, Processing Single Tables, Processing Multiple Tables, PL/SQL Constructs - Views, Triggers, Cursors etc; Transaction Processing – Properties, Schedules and Serializability Issues. Concurrency Control – Introduction, Locking and Time Stamping Issues etc.

Unit V
Advance Topics
Physical Database Design – File Organization and Indexes, Hashing Techniques, B-trees, B+ Trees etc; Database Recovery, Database Security, Introduction to Data Warehousing and Data Mining, Emerging Database Technologies and Applications etc., Overview of Oracle 10i.

Books Recommended:

[1]. Fundamentals of Database Systems – Elmasri ,Navathe, Addision Wesley.
[2]. Modern DataBase Management – Macfadden,Hoffer,Prescott ,Pearson Education Asia.
[3]. Database System Concepts – Silberchatz, Korth and Sudarshan, Mcgraw Hill, Fourth Edition
[4]. An Introduction to Database Systems, C.J. Date, Addision Wesley.
[5]. Database Systems, Connolly and Begg, Pearson Education.
[6]. Teach Yourself SQL & PL/SQL, Ivan Bayross BPB Publication.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT405 **Software Engineering**	**L**	**T**	**P**		**TH**	**CW**	**SW**	**PR**	**Total**
	4	0	2	Max	100	50	50	50	250
Duration of Theory Paper: **3 Hours**				Min	35	25	25	25	110

Objective: To familiarize with the process of software development life cycle using the concepts of software engineering.
Prerequisite: Knowledge of a programming language, preferably object oriented and a midsize project work.

COURSE OF CONTENT

Unit I
Software Engineering process- Basic concepts of System Design; Software life cycle; role of Software Engineer; Application Domains. Software Qualities and nature requirements and Measurement. Technique; other Software Engineering issues like formality, modality, abstraction, reuse, generality etc.

Unit II
Software Design Modularity Design, object-orientation; concurrent software specification. Case Styles Operational, Descriptive Logic and Algebraic specification; End-user requirements.

Unit III
Verification goods and Requirement – Testing, Debugging Analysis, Analysis software Metrics case strides.

Unit IV
Software Engineering Process-Different Models; Process Organization; Case Studies Software Engineering, Management planning control, Organization and Risk Management.

Unit V
Software Engineering Tools – System programs, Role of Programming languages; CASE Tools; Objected Oriented software Engineering; format Methods; Reengineering process ,Client Server Software Engineering.

Book Recommended:

[1]. C.Gezzi, M. Jazayeri and D. Mandriohi Fundament of software Engineering, PHI 1996.
[2]. R.S. Pressman, software Engineering A Practitioner Approach, 4/e McgrawHill International Edition 1997.
[3]. P.Jalote, An Integrated Approach to Software Engineering, Naresa Publishing, Latest Edition.
[4]. Ian Sommerville, Software Enginering, Pearson education , 7 th edition

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Common to All Branches)					
Subject Code & Name	Instructions Hours per Week			Marks					
3SS456 Entrepreneurship Development & IPR	L	T	P		TH	CW	SW	PR	Total
	2	0	0	Max	-	50	-	-	50
Duration of Theory Paper: **Only internal Test**				Min	-	25	-	-	25

Objectives: To impart the basics of Entrepreneurship development Concepts. To develop the skills of entrepreneurship & to encourage the students to become an entrepreneur. To impart the basics of Intellectual property Rights.
Prerequisite: Nil

COURSE CONTENTS

UNIT I
Introduction:
Definition of Entrepreneurship and role of an entrepreneur. Entrepreneurial characteristics, values and attitudes. Entrepreneurship development programmes.

UNIT II
Modes & Methodology of setting up a Small Scale Industry:
Project Identification, Market Survey, Location & Building, Technical Know - How, Raw material & other Utilities, Professional & Skilled Manpower, Project Report, Finance, Whom to Approach.

UNIT III
Institutional Support to Entrepreneurs:
Need for Institutional support different Government & Non Government institutions to support Entrepreneurs like, NSIC, SIDO, SSIB, SSIDC, SISIs , DTICs, industrial Estates, Specialized Institutions. Registration of a small scale Industry.

UNIT IV
Intellectual Property Rights:
Introduction of IPR, various perspective of IPR like Innovation & Creation, Innovators & Creators, Sharing of Knowledge, Trade Marks etc. General Provisions & Basic principles of IPR.

UNIT V
Patents:
Definitions, Need for a patents, what can be patented, Patent laws, Rights of Patent Holders, Filing of a Patent, Industrial Scenario.

BOOKS RECOMMENDED:
[1]. Colombo plan staff college for Technician Education, Manila , *Entrepreneurship Development*, Tata *McGrawHill 1998*
[2].N.K. Acharya, *Text book on intellectual Property Rights*, Asha Law House New Delhi, New Edition 2001.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT452 Analysis of Algorithm	L	T	P		TH	CW	SW	PR	Total
	4	0	2	Max	100	50	50	50	250
Duration of Theory Paper: **3 Hours**				Min	35	25	25	25	110

Course Objectives: This course aims to introduce approaches for analyzing algorithms in various domains, and techniques for designing efficient algorithms. Upon completion of this course the student should be able to:
1. apply the algorithms and design techniques to solve problems;
2. have a sense of the complexities of various problems in different domains.

Prerequisite: Knowledge of data structures may assist the learning process.

COURSE OF CONTENTS

Unit-I
Introduction to Algorithms: Design & analysis issues; Types of algorithms; Performance issues - Time and space complexity; Asymptotic analysis. Mathematical preliminaries; functions & their growth rates; Recurrence relations, Methods for solving recurrences.

Unit-II
Analysis of Some Sorting and Searching Algorithms: Elementary sorting techniques: Selection, Bubble, and Insertion sorts; Advanced sorting techniques: Heap, Merge and Quick sorts; Radix & Bucket sorts. Searching techniques: Linear and binary search; Searching minimum and maximum elements.

Unit-III
Algorithms Design Techniques: Divide–and-Conquer, Greedy Method, Dynamic programming, Backtracking and Branch-and- Bound; Illustration of above strategies using appropriate examples like; Knapsack problem, Optimal storage on tapes, finding shortest path, all pairs shortest path, finding minimum cost spanning trees, Queens problems, Traveling salesperson problem etc.

Unit-IV
Analysis of Matrix and Polynomial Algorithms: Boolean Matrix Multiplication's; Strassen's matrix multiplication; Matrix chain multiplication problem; Solving Linear Equations, Computation of polynomials – Horner's method. String matching algorithms.

Unit-V
Non-deterministic Algorithms: Introduction. Nondeterministic Complexity, Computational classes: – P, NP, NP-Complete, and NP-Hard; reducibility, Decision and optimization problems, Some NP and NP-Hard problems: Hamiltonion cycle, Traveling Salseperson (TSP). Satisfiability, Clique problems etc.

BOOKS RECOMMENDED:
 [1] T.H. Coreman, C.E. Leiserson and R.L. Rivest, Introduction to Algorithms, Prentice Hall of India, 1990.
[2] E. Horowitz, S. Sahni, S Rajasekaran, Computer Algorithms, Galgotia Publications.
[3] Saara Base, Computer Algorithms: Introduction to Design and Analysis, Addision Wesley, 2/e, 1988.
[4] Knuth, D, The art of computer programming , Vols. 1-2-3, Addision Wesley 1968-73.
[5] A V Aho, J E Hopcroft & J D Ullman, *The Design and Analysis of Computer Algorithms*, Addison Wesley, 1974.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT453 Server Side Programming	L	T	P		TH	CW	SW	PR	Total
	4	0	2	Max	100	50	50	50	250
Duration of Theory Paper: **3 Hours**				Min	35	25	25	25	110

Objective: To learn web development using server side programming technologies and to develop skills for building web application with dynamic contents.

Prerequisite: Knowledge of Java Programming language (core), HTML and basics of SQL.

<div align="center">COURSE OF CONTENT</div>

Unit I
Introduction: HTTP protocol: Http request, Http response; web container and web server overview; web application.

Unit II
Database Connectivity with Middle tier: Database drivers; API for interaction with database; Connection pooling; Transaction.

Unit III
Server Side Technology: Comparisons of prevalent server side technologies; Servlet basics; Servlet lifecycle; Implicit objects; scope.

Unit IV
Session Tracking : Approaches to session tracking; Session tracking with JAVA servlet API; Servlet collaboration.

Unit V
JAVA Server Pages: JSP overview; Directives; Scripting elements; Standard actions, Implicit objects; Scope; XML – equivalent tags; JSP design basics; Dispatcher approach; Introduction to JSP tag extension.
Introduction to CGI, PHP and ASP. Comparison of these technologies with servlet and JSP.

BOOKS RECOMMENDED:

[1] J2EE Tutorial from www.java.sun.com.
[2] JAVA servlet programming, Jason Hunter, William Crawford, O'Reilly, SPD.
[3] Professional JAVA server programming, J2EE edition, volume I, Wrox, SPD.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT454 Web Engineering	L	T	P		TH	CW	SW	PR	Total
	4	0	0	Max	100	50			150
Duration of Theory Paper: **3 Hours**				Min	35	25			60

Objective: To learn the process of information exchange over Web and related issues.

Prerequisite: Knowledge of HTML and Java programming language (core).

Course of Contents

Unit I
XML Basics : Introduction to Markup languages, What is XML?, Elements & Attributes, Character data,Character & entity refrences, CDATA sections,Comments,Processing instructions, Document structure,Well formed XML,Valid XML,XML parsers.

Unit I
Document Type Defination and XML Schema: Document Type declaration, Element Type declaration, Attribute type declaration, Attribute Types, Attriubute defaults, Entities, Notation Declarations, Limitations of DTD, Namespaces in XML.Why do we need an XML Schema?XML Schema vs DTD, Schena Structure, Simple Types & Complex Types, Element Declaration, Attribute declaration, Local vs global Declarations, Deriving new types & using facets.

Unit I
 Transforming XML and XPATH: What is Transformation? Executing Transformations,XSLT for presentation:XML to HTML Example, XSLT for Data conversion:XML to XML example.Introduction to XPATH,XPATH Axes, XPATH Expressions and Location Paths,XPATH Syntax, XPATH Functions.

Unit I
Document Object Model and Simple API for XML: DOM Implementation, DOM Components,Creating Nodes, Traversing the Nodes. DOM vs SAX,SAX based parsers, Events,Using SAX.

Unit I
Web Services: Distributed Computing Architecture:DCOM ,IIOP, Java RMI, Web Services, The Web services stack:SOAP, WSDL and UDDI, Service Oreiented Architecture, The Three revolutions:Data, Architecture and Software.

BOOKS RECOMMENDED:

[1] David Hunter " Beginning XML",Wiley dreamtech,2005,Third Edition
[2] Kal Ahmed,Sudhir Ancha "Professional Java XML",SPD,2004.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3ET455	**L**	**T**	**P**		**TH**	**CW**	**SW**	**PR**	**Total**
Digital Communication Engineering	4	0	2	Max	100	50	50	50	250
Duration of Theory Paper: **3 Hours**				Min	35	25	25	25	110

Course Objectives:
- To provide an introduction to the basic principles in analog and digital communication.
- To introduce the various processes like sampling, modulation and coding techniques, channel coding techniques etc. that are used in modern telecommunication system.
- To review the basic Fourier techniques and its application in these processes.
- To give exposure to quantitative method of measuring information and determining the capacity of communication system.

Prerequisite(s): Basic exposure to signals and systems.

COURSE OF CONTENTS

UNIT I
Review of Fourier techniques, Fourier techniques for linear system analysis, Fourier transform properties convolution, Error Function and complimentary error function, Introduction to analog modulation techniques like AM, FM, PM.

UNIT II
Line coding: NRZ, RZ, Biphase, Duo binary etc. their comparison and spectrum associated either their wave forms.
Signal and Spectra: classification of signals, spectral density, auto-correlation, random signals, bandwidth of digital data.

UNIT III
Sampling and quantization, Digital coding techniques, PCM, DPCM, ADPCM, DM, ADM, Vocoders, optimum filter, matched filter. Digital modulation techniques, binary PSK, QPSK, MSK etc., performance analysis and comparison of digital modulation techniques in presence of noise.

UNIT IV
Information theory: concept of amount of information, entropy, information rate, coding to increase average information per bit, Huffman coding, channel capacity, Shannon's theorem of channel capacity.
Channel coding: Linear block codes, systematic Linear blocks codes, parity check matrix, syndrome testing, cyclic codes hamming codes.

UNIT V
Introduction to spread spectrum techniques – spread spectrum overview, pseudo noise sequence, direct sequence spread spectrum system, Frequency hopping system, synchronization, spread spectrum application, CDMA systems.

BOOKS RECOMMENDED:
[1] Taub & Schilling, "Principal of Communication System", Tata McGraw Hill publication, Third edition, 2007.
[2] J.G. Proakis, "Digital Communication", McGraw Hill publication, Fourth edition, 2001.
[3] Lathi B.P., "Modern Analog and Digital Communication Systems", Oxford Univ. Press, Third edition.
[4] Haykins Simon, "Digital Communication", Wiley Publication, Third edition, 2007.
[5] Haykins Simon, "Analog and Digital Communication", Wiley Publication, Third edition, 2007.
[6] Bernard Sklar, "Digital communication", Pearson Education, Second edition, 2007.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Information Technology)					
Subject Code & Name	Instructions Hours per Week			Marks					
3IT456 **Software Workshop**	L	T	P		TH	CW	SW	PR	Total
	-	-	2	Max	-	-	50	50	100
Duration of Theory Examination Only practical examination will be held				Min	-	-	25	25	50

Course Objectives: - To familiarize students about Visual Basic.NET its components, applications, and services. XML based web page designing

Prerequisite: Visual Basic, HTML

COURSE OF CONTENTS

UNIT I
Introduction to .NET, VB6 and VB.NET differences, programming with .NET.

UNIT II
Object-Oriented Programming and VB.NET, Data Types, Variables and Operators, Arrays, Conditional Logic, Procedures, Dialog Boxes, Error Handling, Namespaces, Classes and Objects, Multithreading.

UNIT III
IDE for VB.NET, Data access in .NET, Windows Forms, Specific Controls, and Visual Inheritance.

UNIT IV
VB.NET and the Web, Introduction to ASP.NET, Page Framework, HTML Server Controls, Web Controls, Events. XML scripting and API for XML.

UNIT V
Web Services- SOAP, WSDL, Disco and UDDI, Instantiating-Invoking Web Services, Creating proxy classes with WSDL, Creating Web Service Project.

BOOKS RECOMMENDED:
[1] Bill Evjen, JasonBeres, Visual Basic.NET Programming, Bible, WILE Dreamtech, 2005.
[2] Jeffrey R. Shapiro, Visual Basic.NET, The Complete Reference, Tata McGraw-Hill, 2006.

Devi Ahilya University, Indore, India Institute of Engineering & Technology				BE III Year (Common to All Branches)					
Subject Code & Name	Instructions Hours per Week			Marks					
3SS406 Principles of Management	L	T	P		TH	CW	SW	PR	Total
	2	0	0	Max	-	50	-	-	50
Duration of Theory Paper: **Only internal Test**				Min	-	25	-	-	25

Course Objectives: To impart the basics of Management Concepts, Evolution of management as discipline and to deal with different Principles & Functions of Management.

Prerequisite(s): - NIL

COURSE OF CONTENTS

Unit I
The Nature of Management:
Definition and role of management; the function of a manager, Scientific management. Various schools of management thought. The Functions & Principles of management.

Unit II
Planning:
Nature and purpose of planning, Components of planning objective of business.

Unit III
Organization:
Nature and purpose of organizing Structure, Centralization, Decentralization, Span of control, Delegation of authority relationship. Formal and informal organization.

Unit IV
Directions & Staffing:
Direction process, Theories of motivation and leadership, Need analysis, Communication.

Unit V
Control:
Meaning and process of control, techniques of control evaluation, developing and compensating the employees, Merit rating.

BOOKS RECOMMENDED:
[1]. Koontz and O'Donnel, Essentials of Management,6/E TMH Jan.1986
[2]. R.D Agrawal, *Organization & Management.*1/E PHI 1997
[3]. PeterDrucker, *Practice of Management ,*1992
[4]. Mc Farland, *Management, Principal and Practice.*
[5]. L.M Prasad, *Principal and Practice & Mgt.*
[6]. T.N Chhabra, *Principal and Practice & Mgt,*1/E
[7]. G.R Terry, *Principal of Management's.*