INFORMATION TECHNOLOGY
HIMACHAL PRADESH UNIVERSITY

SCHEME & SYLLABUS

IN THE SUBJECT OF INFORMATION TECHNOLOGY FOR B. Sc. WITH MAJOR IN INFORMATION TECHNOLOGY AND MINOR ELECTIVE IN INFORMATION TECHNOLOGY (2013-2014 onwards)

(A) Structure Outline of Major in Information Technology (Minimum Credits to be Earned=56)

Semester	Course Code	Course Type	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
I (Odd)		Compulsory Course I	To be Selected from the list of Compulsory Courses	3	Compulsory ï 6 **Core – 8** Elective ï 8 GI & H ï 2 Total ï 24
		Compulsory Course II (Skill Based)	To be Selected from the list of Compulsory Courses (Skill Based)	3	
	BSCIT00101	Major Core Course I	**Information Technology Fundamentals**	**4**	
	BSCIT00102	Major Core Course II	**P C Software**	**2**	
		Minor Elective Course I (a)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
		Minor Elective Course I (b)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
	BSCIT00102(P)	Major Core Lab Course II	**PC Software Lab 1**	**2**	
		GI and H Course I	To be Selected from the list GI and Hobby Courses	2	
II (Even)		Compulsory Course III	To be Selected from the list of Compulsory Courses	3	Compulsory ï 6 (12) **Core – 8 (16)** Elective ï 8 (16) GI & H ï 2 (4) Total 24 (48)
		Compulsory Course IV(Skill Based)	To be Selected from the list of Compulsory Courses (Skill Based)	3	

Semester	Course Code	Course Type	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
	BSCIT00203	Major Core Course III	**Computer Organization and Architecture**	**4**	
	BSCIT00204	Major Core Course IV	**Programming Using C**	**2**	
		Minor Elective Course II (a)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
		Minor Elective Course II (b)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
	BSCIT00204(P)	Major Core Lab Course IV	**C Programming Lab II**	**2**	
		GI and H Course II	To be Selected from the list GI and Hobby Courses	2	
III (Odd)		Compulsory Course V	To be Selected from the list of Compulsory Courses	3	Compulsory ï 6 (18) (Complete) **Core – 8 (24)** Elective ï 8 (24) GI & H ï 2 (6) (Complete) Total 24 (72)
		Compulsory Course VI	To be Selected from the list of Compulsory Courses (Skill Based)	3	
	BSCIT00305	Major Core Course V	**System Analysis and Design**	**4**	
	BSCIT00306	Major Core Course VI	**Data Base Management System**	**3**	
		Minor Elective Course III (a)	To be Selected from the list for Minor Elective Subject other than Information Technology	3	
		Minor Elective Course III(b)	To be Selected from the list for Minor Elective Subject other than Information Technology	3	
	BSCIT00306(P)	Major Core Lab Course VI	**Data Base Management System Lab III**	**1**	
		GI and H Course III	To be Selected from the list GI and Hobby Courses	2	
IV (Even)	**BSCIT00407**	Major Core Course VII	**Operating System**	4	**Core – 8 (32)** Elective ï 8 ((32)

Semester	Course Code	Course Type	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
	BSCIT00408	Major Core Course VIII	**Internet Technology & Web Page Designing**	**3**	Core / Elective (additional) - 4 Total 20 (92)
		Minor Elective Course IV (a)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
		Minor Elective Course IV (b)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
	BSCIT00408(P)	Major Core Lab Course VIII	**Internet Technology & Web Page Designing Lab IV**	**1**	
		Core / Elective Course (Additional)*		4	
V (Odd)	**BSCIT00509**	Major Core Course IX	**Desktop Publishing & Design**	**4**	**Core – 12 (44)** Elective ï 8 (40) (Complete) Core / Elective (additional) ï 4(8) Total 24 (116)
	BSCIT00510	Major Core Course X	**Management Information System**	**4**	
	BSCIT00511	Major Core Course XI	**OOPS with C++**	**2**	
		Minor Elective Course V(a)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
		Minor Elective Course V(b)	To be Selected from the list for Minor Elective Subject other than Information Technology	4	
	BSCIT00511(P)	Major Core Lab Course XI	**OOPS With C++ Lab V**	**2**	
		Core / Elective Course (Additional)*	Any one of the Additional or open elective courses	4	
VI (Even)	**BSCIT00612**	Major Core Course XII	**Fundamental of Networking**	**4**	**Core – 12 (56)** Core / Elective (additional) ï 28 Total 32 (148)
	BSCIT00613	Major Core Course XIII	**Multimedia Technology**	**4**	
	BSCIT00614	Major Core lab Course XIV	**Project Development**	4	

***Additional Elective Courses offered by Information Technology Department (can be chosen for earning credits over and above 56 Major subject credits, 40 Minor elective credits, 9 (Min.) Compulsory course credits and 1 (Min.) 3G I&H Course credits i.e. total 106 credits; for getting B.Sc. Degree a learner has to earn a minimum of 120 credits.)**

Semester	Course Code	Course Type	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
V/VI	**BSCIT00615**	Core / Elective Course (Additional)*	Digital Electronics	4	
V/VI	**BSCIT00616** **BSCIT00616(P)**	Core / Elective Course (Additional)*	Linux Programming Linux Programming Lab	2 2	
V/VI	**BSCIT00617**	Core / Elective Course (Additional)*	Artificial Intelligence	4	
V/VI	**BSCIT00618** **BSCIT00618(P)**	Core / Elective Course (Additional)*	Internet Technology Internet Technology Lab	2 2	
V/VI	**BSCIT00619** **BSCIT00619(P)**	Core / Elective Course (Additional)*	Programming with JAVA Programming with JAVA Lab	2 2	
V/VI	**BSCIT00620**	Core / Elective Course (Additional)*	Computer Graphics	4	
V/VI	**BSCIT00621** **BSCIT00621(P)**	Core / Elective Course (Additional)*	Dot Net Technologies Dot Net Technologies Lab	2 2	

V/VI	**BSCIT00622** **BSCIT00622(P)**	Core / Elective Course (Additional)*	Programming Using Visual Basic Programming Using Visual Basic Lab	2 2	

*Open Elective Courses offered by Information Technology Department

Semester	Course Code	Course Type	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
VI	**BSCIT00408** **BSCIT00408(P)**	Open /Core Elective Course (Additional)*	Internet Technology & Web Page Design Internet Technology & Web Page Design Lab	3 1	
VI	**BSCIT00102** **BSCIT00102(P)**	Core / Elective Course (Additional)*	PC Software PC Software Lab	2 2	

General Interest Courses Offered by Information Technology Department

Semester	Course Code	Course Type	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
I/II/III	**BSCIT0**23**	GI/H	Introduction to Window OS	2	
I/II/III	**BSCIT0**24**	GI/H	e-Commerce	2	
I/II/III	**BSCIT0**25**	GI/H	Cyber Law	2	

(B) Structure Outline of Minor Elective in Information Technology for other than Major Information Technology Students (Minimum Credits to be Earned=20). Other than Physic Major learner can do Double major by earning 34 more credits over and above 20 credits of Minor Elective.

List of Minor elective in Information Technology

Semester	Course Code	Course Name	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
VI (Even)	**BSCIT00101**	**Minor Elective Course I (a)**	**Information Technology Fundamentals**	4	
	BSCIT00102 **BSCIT00102(P)**	**Minor Elective Course II (a)** **Minor Elective Lab Course II (a)**	**PC Software** **PC Software Lab**	**2** **2**	
	BSCIT00204 **BSCIT00204(P)**	**Minor Elective Course III (a)** **Minor Elective Lab Course III(a)**	**Programming Using C** **C Programming Lab**	**2** **2**	
	BSCIT00306 **BSCIT00306(P)**	**Minor Elective Course IV (a)** **Minor Elective Course IV (a)**	**Data Base Management System** **Data Base Management System Lab**	**3** **1**	
	BSCIT00407		**Operating System**	**4**	

Compulsory (Skill Based) Course based on "spokentutorial.org" based on National Mission of Education through Information and Communication Technology (NMEICT), MHRD, Government of India.

Semester	Course Code	Course Type	Course Name	Credit(s)/ week	Cumulated Credits Category-wise
I/II/III	**BSCIT**26** **BSCIT**26(P)**	Compulsory Course (Skill Based)	Basic IT skills	2 1	
I/II/III	**BSCIT**27** **BSCIT**27(P)**	Compulsory Course (Skill Based)	Blender	2 1	
I/II/III	**BSCIT**28** **BSCIT**28(P)**	Compulsory Course (Skill Based)	GIMP	2 1	
I/II/III	**BSCIT**29** **BSCIT**29(P)**	Compulsory Course (Skill Based)	JAVA	2 1	

BSCIT00101- Information Technology Fundamentals

L	T	P
2	0	2

Unit-I

Information, concepts and Evolution of information processing, data, information, language and communication, Block diagram of computer and functions of each unit. Data storage devices and media: primary storage: storage addresses and capacity type of memory: secondary storage, magnetic tape, data representation r/w, magnetic disc, fixed & removable, data representation and r/w/, floppy, disk drives, Winchester disk drive, conventional disk drives, data organization,

Unit-II

Input output devices : character printers line printer page printers, keyboard devices, scanners, light pen, mouse, visual display devices, data communication equipment, software system software application software.

Unit-III

Computer and communication single user multi-user, multiprocessing, multiprogramming, Time sharing, real time processing workstation, client server systems computer network protocols, LAN, WAN, transmission media-twisted pair, coaxial cable, radio link, microwave link, optical fiber, magnetic tape.

Unit-IV

Evolution of Internet, Internet application, TCP-IP, Addressing in Internet-IP and Domains, Internet Service Providers, Types of Connectivity such as dial-up leased, VSAT, etc., Internet Server and Client modules of various operating systems.

TEXT:

1. Rajaraman, V. "Fundametnal of Computers".Printice Hall India New Delhi.
2. P.K. Sinha, " Computer Fundamental" BPB Publication

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00102 - PC Software

L	T	P
2	0	2

UNIT -I

DOS commands: (internal (DIR, DATE, TIME, CLS, CD, RD, MD, PATH, TYPE, DEL, ECHO, COPY, REN, PROMPT, VOL, VER), external (ATTRIB, CHKDSK, DISKCOPY, DISKCOMP, XCOPY, TREE, DELTREE, DOSKEY, FORMAT, FIND, SORT, FDISK, MORE, SYS)), Concept of files & directories, Wild card characters, Redirection operators.
Windows 7: Definition, Benefits, Features & uses of Windows 7, Control panel, Accessories, Task bar, My computer uses, Recycle bin.

UNIT -II

Office 2007: Elements, Introduction to Office 2007, Customizing the Office Environment, Managing Files in Office, Text Tools, Drawing and Graphics Tools.
Word Processing; Definition, Benefits, Features & uses of Word 2007, Menus, Toolbars, Cursor control keys, Short cut keys, Hot keys, Editing Text, Document Formatting, Formatting text, Find and replace, Tables and Columns, Advanced Page Layout in Word, Spell check, Thesaurus, Mail Merge, Labels and Envelopes, Macros.

UNIT –III

Spreadsheets: Definition, Benefits, Features & Uses of MS Excel 2007, Menus, Toolbars, Worksheets, Formatting Worksheets and Restricting Data, Calculating with Formulas and Functions, Ranges, Auto fill, Data (sort, filter, validation, subtotal), Viewing and Manipulating Data with charts and PivotTables, Print, Macros.

UNIT –IV

Presentations: Definition, Benefits, Features & Uses of PowerPoint, Menus, Toolbars, Creating and Editing Slides, Adding graphics, Multimedia, and Special Effects to Slides, Insert (picture, slide, text), Master slide, Views, Animation, Action buttons, Macros.

Text & Reference Books:

1. Jennifer Ackerman Kettell, Guy Hart-Davis, Curt Simmons, "Microsoft Office 2007: The Complete Reference", Tata McGraw Hill.
2. Biswaroop Roy Choudhary, "Computer course", Fusion Books.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00203- Computer Organization and Architecture

L	T	P
4	0	0

UNIT -I

Data representation: number systems, decimal to binary, octal and hexadecimal conversion and vice versa, binary coded decimal numbers, hamming code for error detection, alphanumeric codes, arithmetic operations, binary addition and subtraction, addition/subtraction of numbers in 1's and 2's complement notation for binary numbers and 9's and 10's complement notation for decimal numbers, binary multiplication and division.

UNIT-II

Register Transfer Language: Register transfer, Bus and Memory transfer (three-stage bus buffers, memory transfer), arithmetic micro-operations Logic micro-operation (list op logic micro-operations, hardware implementation), shift micro-operations (hardware implementation), arithmetic logic shift unit, instruction codes (stored program organization, indirect address), computer registers (common bus register).

UNIT-III

Computer instructions (instruction set completeness), timing and control, instruction cycle (fetch and decode, types of instruction, register-reference instructions), Micro programmed control, control memory, addressing sequencing (conditional branching, mapping of instructions, subroutine)
Central Processing Unit: Introduction, general register organization (control word, examples of micro-operations), stack organization (register stack, memory stack, reverse polish notation, evaluation of arithmetic expressions),

UNIT-IV

Instruction formats (three-address instructions, two address instructions, one-address instructions), addressing modes.
Input Output Organization: Introduction to peripheral devices, input output interface (I/O bus and interface modules, I/O versus memory bus, isolated versus memory-mapped I/O), asynchronous data transfer (strobe control, handshaking).

Text and reference books:

1. M.Morris Mano, "Computer System Architecture" 3rd edition, PHI.
2. V. Rajaraman, T. Radhakrishanan, "An Introduction to Digital Design", PHI
3. J.P.Hays, "Computer Organization and Architecture", McGraw Hill.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00204- Programming Using C

L	T	P
2	0	2

UNIT-I

Introductory Concepts: Introduction to computers, Computer characteristics, modes of operation, Types of programming languages, Introduction to C, some simple C programs, Desirable program characteristics.
C Fundamentals: C character Set, Identifiers and keywords, data types, constants, variables and arrays, Declarations, expressions, statements, Symbolic constants.

UNIT-II

Operators and expressions: Arithmetic operators, unary operator, Relational and logical operators, assignment operators, conditional operators, Library Functions.
Data Input and Output: Preliminaries, singe character input, singe character output, Entering input data, writing output data, the gets and puts function.
Preparing and Running a Complete C Program: Planning a program, Writing a C program, entering the program into the compiler, compiling and executing the program, error diagnosis, debugging techniques.

UNIT-III

Control Statements: Preliminaries, Branching, Looping, Nested control statements, switch statement, break statement, The continue statement, The goto statement, The comma operator.
Arrays: Defining an array, processing an array, passing arrays to functions, Multidimensional arrays, Arrays and strings.

UNIT-IV

Functions: Defining a function, accessing a function, function prototypes, passing arguments to a function, recursion.
Pointers: Fundamentals, Pointer declarations, Passing pointers to the functions, pointers and one dimensional array, dynamic memory allocation, Operations on pointers, arrays of pointers.

Text & Reference Books:

1. Byron Gottfried, "Programming with C", Schaum's Outlines, Tata McGraw Hill.
2. Mullis Cooper, "Spirit of C": Jacob Publications.
3. Yashwant Kanetkar, "Let us C": BPB.
4. Kerninghan B.W. & Ritchie D. M., "The C Programming Language": PHI.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00305- System Analysis and Design

L	T	P
4	0	0

UNIT -I

Overview of System Analysis and Design: Business System concepts, System development life cycle, Project Selection, Feasibility Analysis, Design, Limitation, testing and evaluation. Initial Investigation: Sources of Requests, User / Analyst interaction, Qualities of a System Analyst.

UNIT –II

Feasibility studies: Introduction, Technical, Operational, Behavioral and Economic feasibilities, cost and benefit analysis.

UNIT –III

System requirement specification and analysis: Fact finding techniques, Data Flow Diagrams, Data Dictionaries, process organization and interaction, Decision Analysis, Decision Trees and Tables, Top down and bottom up variance, Audit trails.

UNIT –IV

Detail Design: Modularization, module specification, file design, system development involving databases.
System Control and Quality Assurance: Design objectives reliability and maintenance, software design and documentation tools, unit and integration testing, testing practice and plans, system control.

Text & Reference Books:

1. Awad, “System Analysis Design”, Galgotia Publishing, Delhi.
2. Jamas, A.S., “Analysis and design of information systems”, Mc Graw Hill.
3. Luteberg, M.,Golkuhl, G and Hilsson, A, “Information System Development a Systematic Approach”, PHI.
4. Leeson N., “System Analysis and Design”, Science Research Associates, 1985.
5. Samprive, P.C., “System analysis: Definition Process and Design”.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00306- Data Base Management System

L	T	P
3	0	1

UNIT-I

Introduction To Database Concepts: Data Modeling for a Database, Fields, Records and Files, Abstraction and Data Integration, Database Architecture, Users, Structure of DBMS, Advantages and Disadvantages of DBMS.
Data Models: Entity, Attribute, Relationship, Data Model Classifications, File based, Traditional, Semantic, Entity-Relationship Model.

UNIT-II

File Organization: Operation on files, Sequential Files, Index-Sequential Files, Types of Indexes, Implicit, limit, multilevel, Direct Files, Indexing using B-Tree Structure.
Relational Model: Relational Database- Relational Algebra, Relational Calculus.

UNIT-III

Relational Database Design: Relational Scheme and Relational Design, Functional Dependency, Normal forms (First, Second, Third, Boyce Code), Decomposition and dependency preservation, Multi-valued dependency.

UNIT-IV

MS Access: Tables (Creation/Design structure, Data Entry), Primary keys, Foreign Keys Master-Detail Table, Query (Select, Make-Table, Update, Append, Delete) Form (Modal, Modeless), Relationships Report (Creation of a simple report from a table and from a query).

Text & Reference Books:

1. Elmasri And Navathe, “Fundamentals of Database Systems”, Benjamin/Cummings Publishing Co. Inc.
2. Bipin C. Desai, “An Introduction to Database Management System”.
3. Users Reference Manuals Of Ms Access.
4. Date, C.J., ñAn Introduction to Database Systemò, Narosa Publishing House.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00407 - Operating System

L	T	P
4	0	0

UNIT –I

Operating System Concepts: Operating System Classification- Simple Monitor, Multi Programming, Time Sharing, Real Time Systems, Multiprocessor Systems, Batch Processing, Single User, Multi User, Operating System Functions and Characteristics.

UNIT –II

Processor Management: Process Overview, Process States, Process State Transitions, Process Control Block, Operations On Processes, Suspend And Resume, Interrupt Processing, Scheduling Algorithms, Multiple Processor Scheduling.

UNIT –III

Deadlock: Deadlock Problem, Deadlock, Deadlock Characterization, Necessary Conditions, Deadlock Prevention, Deadlock Avoidance, Deadlock Detection, Recovery From Deadlock.

UNIT –IV

Memory Management: Partition, Paging, Segmentation, Types Of Memory Management Scheme, Bare Machine, Resident Monitor, Swapping, Multiple Partition, Virtual Memory, Demand Paging.

Text & Reference Books:

1. James L. Peterson And Abraham Silberschatz, "Operating System Concepts", Addison Wesley Publishing Company.
2. H.M.Deitel, "Operating Systems", Addison Wesley Publishing Company.
3. A.M.Lister, "Fundamentals Of Operating Systems", Macmillan Publishers Ltd.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00408- Internet Technology & Web Page Designing

L	T	P
3	0	1

UNIT-I

Internet: Evolution of Internet, Internet Application, Network requirements, Bandwidth, Internet features (Electronic Mail, Newsgroups, FTP Archive, Real Time Activity, Video, Audio, Search Engine).

UNIT–II

World Wide Web: Definition, WWW Browsers, WWW Servers, Dial-Up SLIP, PPP Access, Dedicated line, ISDN.TCP/IP Connectivity- DNS Servers, Domain Names Registration process, IP addressing, Routing with TCP/IP Basics

UNIT-III

HTML: Text formatting, Data, Tables, Table layout, Images, HTML Interactivity, URLs, HTTP, NNTP, Hyperlinks, Menus & Image Maps, HTML Form, Embedded objects in HTML, Web Typography, Approaching Web Typography, Graphics and Type, Families and Faces, Type forms, Color and Type, Adding Graphics, Adding Graphics with the Image Element, Using images as links, Creating Image Maps, Working with Image Files, Layout Technology, Standard HTML Formatting, Tables, Frames,

UNIT-IV

CSS: Formatting your site with Cascading Style Sheets, Seeing Style Sheets in Action, Understanding CSSI's Advantages and Limitations, Making HTML and CSSI's, Making HTML and CSSI work together, Learning How CSSI Works, Using CSSI Properties.

Text Books:

1. Internet Get Started: BPB Publications.
2. Loren Buhle: Webmaster Professional Reference: New Riders Publishing.
3. Rick Darnell: HTML 4, Techmedia.
4. Tauber: Mastering Front Page 2000: BPB.
5. James Jaworski, Making Java Script and JSCRIPT, BPB Publications.
6. HTML Complete: BPB Publisher.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00509- Desktop Publishing & Design

L	T	P
4	0	0

UNIT-I

D.T.P For Publications: Introductions to Printing , Types of Printing, Offset Printing, Working of offset Printing, Transparent Printout, Negative & Positives for Plate were making, Use of Desk Top Publishing in Publications, Importance of D.T.P in Publication, Advantage of D.T.P in Publication, Mixing of graphics & Image in a single page production, Laser printers Use, Types, Advantage of lager printer in publication.

UNIT-II

Page Layout: Different page format / Layouts, News paper page format, Page orientations, Columns & Gutters, Printing in reduced sizes.
Page Maker: Introductions To Page Maker Icon and help, Tool Box, Styles, Menus etc., Different screen Views, Importing text/Pictures, Auto Flow, Columns, Master Pages and Stories, Story Editor, Menu Commands and short-cut commands, Spell check, Find & Replace, Import Export etc., Fonts, Points Sizes, Spacing etc., Installing Printers, Scaling (Percentages), Printer setup.

UNIT-III

Use Of D.T.P: Use of D.T.P. in Advertisements, Books & Magazines, News Paper, Table Editor.
Adobe Photoshop: Introduction to Photoshop & Flash, Documents ,Various Graphic Files

UNIT-IV

Extensions Vector Image and Raster Images, Various Colour Modes and Models. Introduction to Screen and Work Area, Photoshop Tools & Palettes, Use of Layers & Filters Working with Images.

Text & Reference Books:

1. Page maker 4.0 & 5.0 by b.p.o. publications.
2. Prakhar complete course for dtp (coreldraw, pagemaker, photoshop)

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00510- Management Information System

L	T	P
4	0	0

UNIT –I

Management Information System: Definition, Meaning and Role of Management Information System Introduction, Definition, System's Approach, Pitfalls in Management Information Systems. Development of Organizational Theory: Management & Organizational Behaviour, Management, Information & System Approach.

UNIT –II

Data Processing: Operation of Manual Information System, Components of Computer System, Conversion of Manual to Computer Based Systems, Data Bank Concept, Types of Computer Based Applications. Information System for Decision Making: Evolution of Information System, Decision Making & Management Information System.

UNIT –III

Strategic & Project Planning for Management Information System: Business Planning, Management Information System Responses, Management Information System Planning- General & Details.
Conceptual System Design: Define Problem, Set System Objective, Establish System Constraints, Determine Information Needs & Sources, Develop Alternative Conceptual Design & Documentation, Prepare the Design Report.

UNIT –IV

Detailed System Design: Aim, Project Management, Define Subsystem, Input, Output & Process Design, System Testing, Software & Hardware selection, Documentation of Detailed Design.

Text & Reference Books:

1. Robert G. Murdick, Joel E. Ross, James R. Claggett, "Information System for Modern Management".
2. Surendra Basandra, "Computers Today".

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00511 - OOPS with C++

L	T	P
2	0	2

UNIT-I

Object oriented programming: Need for OOP, object oriented approach, characteristics of OOP language- objects, classes, Inheritance, Reusability, Polymorphism, overloading advantage of OOP, relationship between C and C^{++}.
Programming Basic: Basic program construction, output using cout, preprocessor directive, comments, integer variables, character variables, input with cin, Type bool, setw Manipulator, type float, type conversion, arithmetic operators, relational operators, logical operators.

UNIT-II

Loops and decision control statements: loop- for, while, do, decision-if, if-else, switch, conditional operator, other control statements- break, continue, goto.
Structures and functions: structures, Accessing structure members, structure within a structure, Enumerated Data type, simple functions, passing arguments to functions, Returning values from functions, reference arguments, overloaded functions, storage classes, scope resolution operator.

UNIT-III

Objects and classes: A simple class, classes and objects, specifying a class, using a class, C^{++} objects as physical objects, C^{++} objects as data types, Constructors, objects as function arguments, returning objects from functions.
Arrays: Array fundamental-defining array, array elements, Accessing array elements, Initializing arrays, multidimensional arrays, passing arrays to functions, array of objects, strings-string variables, Avoiding Buffer overflow, string constants, array of strings string as class members, Standard C++ string Class.

UNIT-IV

Operator overloading: Overloading unary operators- the operator keyword, operator arguments, operator return values nameless temporary objects, limitation of increment operators, overloading Binary operators, data conversion, Pitfalls of operator overloading and conversion.

Inheritance: Derived class and base class, specifying the derived class, accessing base class, members, derived class constructors, overriding member functions, class hierarchies, public and private Inheritance, levels of inheritance, multiple inheritance.

Text & Reference Books:

1. Robert Lafore, "Object-Oriented Programming in C++", Galgotia Publications.
2. B. Chandra, "Object-Oriented Programming using C++", Narosa Publications.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00612- Fundamental of Networking

L	T	P
4	0	0

UNIT-I

Introduction to Communication Network: Computer Networks,(Need, uses, and Advantages of Computer Network), Network Models (Peer-to-Peer-Network, Server-based Network, Client-Server Network), Network components, Network Topology (Star, Ring, Bus, Mesh, Tree, Hybrid) Advantage and Disadvantage of each types, Types of Networks (LAN, MAN, WAN), Internet (Brief History, Internet Protocol and Standard)

UNIT-II

Error Detection and Correction: Types of errors (Single–bit-error, Burst-Error), Error Detection (Redundancy, Parity check, CRC, Checksum), Error correction (FEC, Hamming code, Burst error corrections), Data Communication Channel and Media, Conductive Media (Twisted-pair cable, Coaxial cable), Fiber optics (Characteristic of light, Types of Fiber optics), Wireless Transmission, (Microwaves, Infrared, Radio waves).

UNIT-III

OSI Reference Model: OSI Model, OSI Physical Layer Concepts, DLL, Network Layer, TL, SL, PL and AL Concepts. Internet model / TCP/IP Model and Protocols, Modem, DSL, Cable Modem, ISDN, Real world network (Ethernet, Ethernet operation, frame format, Ethernet characteristic, cabling and components), Token Ring and Token Bus networking Technology.

UNIT-IV

TCP/IP Protocol: Introduction, TCP/IP Protocol Suite, Internet Architecture Board, TCP/IP Protocol (TCP,UDP,IP,ARD), concept of Physical Addressing, and logical Addressing, Different Classes of IP addressing, Special IP Addressing.

Text & Reference Books:

1. Ata Elahi, Mehran Elahi, “Data, Network and Internal communication Technology”, Cengage .
2. Behrowz A. Forouzan , “Data Communication and Networking”.
3. Andrew S. Tahanbaum, “Computer Network”.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00613- Multimedia Technology

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UNIT-I

Introduction to Multimedia **:** Needs and areas of use, Development platforms for multimedia, Identifying Multimedia elements Text, Images, Sound, Animation and Video, Making simple Multimedia with PowerPoint. Concepts of plain & formatted text, RTF & HTML texts, Object Linking and Embedding concept.

UNIT-II

Sound: Sound and it Attributes, Mono V/S Stereo Sound, Sound Channels, Sound and Its Effect In Multimedia, Analog V/S Digital Sound, Overview Of Various Sound File Formats On PC WAV, MP3.

UNIT-III

Graphics: Importance of Graphics in Multimedia, Vector and Raster Graphics, Image Capturing Methods Scanner, Digital Camera Etc. Various Attributes of Images Size, Color, Depth , Resolution etc, Various Image File Format BMP, DIB, EPS, PIC, and TIF Format Their Features and imitations, Basics of animation, Software Tools for animation.

UNIT-IV

Video: Basics of Video Analog and Digital Video, How to use video on PC. Introduction to graphics accelerator cards, Brief note on various video standards NTSC, HDTV, Introduction to video capturing Media & instrument Videodisk. Virtual Reality Terminology Head Mounts Display (HMD), Boom, Cave, Input Devices and Sensual Technology

Text & Reference Books:

1. Multimedia: Making it work (4th edition), Tay vaughan, Tata McGraw Hills.
2. Multimedia in action, James E Shuman, Vikas Publishing House.
3. Multimedia basics volume / technology, Andreas hoi zinger, firewall media (Laxmi Publications Pvt. Ltd), New Delhi.

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BSCIT00615- Digital Electronics

L	T	P
4	0	0

UNIT-I

Fundamentals of semiconductor physics: Energy bands in solids- pn-junction diode depletion region, forward and reverse bias, diode as switch; Bipolar Junction Transistor, transistor configurations, bipolar junction transistor (CE configuration) as switch, Saturated and non-saturated logic, Integrated Circuits, characteristics of digital logic families-TTL, ECL, CMOS.

UNIT-II

Logic gates: AND, OR, NOT Gates and their Truth Tables, NOR, NAND & XOR gates, Boolean algebra, Basic Boolean Law's, Demorgan's theorem, Boolean function and their truth tables.

UNIT-III

MAP simplification: Minimization techniques, K-Map, Sum of Product & Product of Sum, Venn diagram. Combinational circuit.

UNIT-IV

Sequential circuits: Half adder & Full adder, BCD adder, Full Subtractor, Flip-flops-RS, D, JK, T & Master-Slave flip-flops, Shift registers, Multiplexer, Encoder, Decoder.

Text & Reference Books:

1. Rajaraman V. & Radhakrishnan, "An Introduction To Digital Computer Design", PHI.
2. Malvino & Leach, "Digital Principles & Applications", TMH Publications.
3. Jain R.P. , "Modren Digital Electronics". TMH Publications.
4. Malvino, "Digital Computer Electronics". TMH Publications.
5. Bartee T.C., "Digital Computer Fundamentals". THM Publications.

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BSCIT 00616 - Linux Programming

L	T	P
2	0	2

UNIT I

Linux Utilities-File handling utilities, Security by file permissions, Process utilities, Disk utilities, Networking commands, Filters, Text processing utilities and Backup utilities, sed – scripts, operation, addresses, commands, applications, awk – execution, fields and records, scripts, operation, patterns, actions, functions, using system commands in awk.

UNIT II

Working with the Bourne again shell(bash): Introduction, shell responsibilities, pipes and input Redirection, output redirection, here documents, running a shell script, the shell as a programming language, shell meta characters, file name substitution, shell variables, command substitution, shell commands, the environment, quoting, test command, control structures, arithmetic in shell, shell script examples, interrupt processing, functions, debugging shell scripts.

UNIT III

Files: File Concept, File System Structure, Inodes, File Attributes, File types, Library functions,the standard I/O and formatted I/O in C, stream errors, kernel support for files, System calls, file descriptors, low level file access – File structure related system calls(File APIs), file and record locking, file and directory management – Directory file APIs, Symbolic links & hard links.

UNIT IV

Process – Process concept, Kernel support for process, process attributes, process control - process creation, waiting for a process, process termination, zombie process, orphan process, Process APIs. Signals– Introduction to signals, Signal generation and handling, Kernel support for signals, Signal function, unreliable signals, reliable signals, kill, raise , alarm, pause, abort, sleep functions.

TEXT BOOKS:

1. UNIX System Programming using C++, T.Chan, PHI.
2. Unix Concepts and Applications, 4th Edition, Sumitabha Das, TMH,2006.
3. Beginning Linux Programming, 4th Edition, N.Matthew, R.Stones,Wrox, Wiley India Edition,rp-2008.

REFERENCES:

1. Linux System Programming, Robert Love, O'Reilly, SPD, rp-2007.

2. Unix Network Programming ,W.R.Stevens,PHI.
3. Unix for programmers and users, 3rd Edition, Graham Glass, King Ables, Pearson Education, 2003.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00617- Artificial Intelligence

L	T	P
4	0	0

UNIT – I

Overview of Artificial Intelligence: Definition Of AI, The Importance Of AI, Previous Works In The History Of AI, AI And Related Fields, Problems, Problem Spaces And Search.

UNIT – II

Knowledge: General Concepts, Definition and Importance of Knowledge, Knowledge-Based Systems, Representation of Knowledge, Knowledge Organization, Knowledge Manipulation, Acquisition of Knowledge.

Structural Knowledge: Graph, Frames and Related Structures.

UNIT – III

Formalized Symbolic Logics: Syntax And Semantics for Propositional Logic, Properties of Wffs, Conversion To Clausal Form, Inference Rules, Resolution, Dealing With Inconsistencies, Truth Maintenance Systems, Symbolic Reasoning under Uncertainty, Statistical Reasoning.

UNIT – IV

Natural Language Processing: Overview of Linguistics, Grammar and Languages, Syntactic Processing, Semantic Analysis, Morphological, Discourse and Pragmatic Processing, Natural Language Generation, Natural Language Systems.

Text & Reference Books:

1. Dan W. Patterson, “Introduction to Artificial Intelligence and Expert Systems.” Prentice-Hall, India.
2. A.Rich and K. Knight, “Artificial Intelligence”, Tate McGraw Hill.
3. E. Charnaik And D.Mcdermott, “Introduction To Artificial Intelligence", Addison-Wesly Publishing Company.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00618 Internet Technology

L	T	P
2	0	2

UNIT – I

Introduction: Internet, World Wide Web, Web Browser, Web Server, Uniform Resource Locator, Multipurpose internet mail extension, Hypertext Transfer Protocol, Security.

UNIT – II

XHTML: History of HTML & XHTML, XHTML- Syntax, Document structure, Text mark-up, Images, Hypertext links, Lists, Tables, Forms, Frames.

UNIT – III

Cascading Style Sheets: Introduction, Levels of style sheets, Style specification format, Selector, Forms, Property value form, Font properties, List properties, Colour, Alignment, Box model, Background Images, & tags.

UNIT – IV

XML: Introduction, Syntax, Document structure, Document type definition, Namespaces, XML schemas, Displaying raw XML documents, Displaying XML documents with CSS, XSLT style sheets, XML processor.

Text & Reference Books:

1. Robert W. Sebesta, "Programming with World Wide Web", Pearson Education.
2. Jamsa, "Html & Web Design: Tips & Techniques", Tata McGraw Hill.
3. Karl Barksdale, E. Shane Turner, "HTML, JavaScript, and advanced Internet technologies BASICS", Cengage Learning.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00619- Programming with JAVA

L	T	P
2	0	2

UNIT – I

Introduction To Object Oriented Programming: Data Abstraction, Encapsulation, Inheritance (Public, Protected And Private), Polymorphism, Information Hiding. Java Elements: Data Types, Literal and Variables, Operators–Arithmetic, Bit-wise, Relational, Boolean Logical, Assignment, The '?' Operator, Operator Precedence.

UNIT – II

Control Statements–Selection (if, switch), Iteration Statements (while, do-while, for) Jump Statements (break, continue, return), Arrays (One-dimensional, Multi-Dimensional).

UNIT – III

Introducing Classes: Class Fundamentals, Declaring Objects, Methods, Constructors, 'This' Keyword, Over loading Methods.
Inheritance: Inheritance Basics, Protected Members, Method Overriding, Multiple Inheritance.

UNIT – IV

Exception Handling: Fundamental, Exception Types, Uncaught Exceptions, Try And Catch, Dealing With Exceptions (try, throw, throws, finally).

Text Book:

1. Patrick Naughten & Herbert Schildt, "The Complete Reference Java", Seventh Edition, Tata McGraw Hill.

Reference Books:

1. Gilbert, Stephan D. And William B. Hccarthy, "Object Oriented Programming in Java", 1997, The Waite Group Press.
2. Mary Compoine And Kathy Walrath, "The Java Turtorial", Addison-Wesley, 1996.
3. Horstmann, Cay S. And Gary Cornell, "Core Java 1.1: Fundamentals", Addison – Wesley, 1997.

Note: In each theory paper, nine questions are to be set. Two questions are to set from each Unit and candidate is required to attempt one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00620 Computer Graphics

L	T	P
4	0	0

UNIT – I

Introduction: Definition Of Computer Graphics And Its Applications, Video Display Devices, Raster Scan Displays, Random Scan Displays, Color CRT Monitors, Direct View Storage Tubes, Flat Panel Displays.
Input Devices: Keyboard, Mouse, Trackball and Spaceball, Joysticks, Digitizers, Image Scanners, Touch Panels, Light Pens, Voice Systems.

UNIT – II

Output Primitives: Line Drawing Algorithms (DDA, Bresenhaum's), Circle Generating Algorithm(Midpoint Circle Drawing Algorithm), Ellipse Generating Algorithm, Midpoint Ellipse Generating Algorithm, Character Generation.

UNIT – III

2D Transformations: Translation, Rotation, Scaling, Reflection, Shear, Composite Transformation-Translation, Rotations, Scaling.

UNIT – IV

Two Dimensional Viewing: Window-To-Viewport Coordinate Transformation, Clipping Operations, Point Clipping, Line Clipping(Cohen-Sutherland Line Clipping, Liang-Barsky Line Clipping), Polygon Clipping(Sutherland-Hodgeman Polygon Clipping, Weiler-Atherton Polygon Clipping).

Text & Reference Books:

1. Donald Hearn & M. Pauline Baker, "Computer Graphics." Prentice Hall India.
2. F. S. Hill Jr., "Computer Graphics", Macmillan Publishing Company.
3. David F. Rogers, "Procedural Elements for Computer Graphics", Tata MacGraw Hill.

Note: In each theory paper, nine questions are to be set. Two questions are to be set from each Unit and candidate is required to attempt at least one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00621 - Dot Net Technologies

L	T	P
2	0	2

UNIT – I

Introducing .NET: Microsoft web development, Move from workstation to distributed computing, Internet factor, importance of.net platform- OS neutral environment, device independence, wide language support, internet based component services.

.NET framework: Common language runtime(CLR), code management and execution, security support, error handling and garbage collection,.net framework class libraries-System classes, data and XML classes, windows form and drawing classes, web classes. Features of .NET framework.

UNIT – II

VB.NET : Introduction, statement, lines, comments, operators, procedures, variables- implicit, explicit, constants, parameters, arrays, branching, looping, objects, classes, inheritance, accessibility of inherited properties and methods, overriding methods.

System class, working with numbers, manipulating strings, DateTime arithmetic, converting values, formatting values, managing arrays.

Namespace and assemblies, Relating namespaces and DLL assemblies, creating assemblies, importing assemblies, using imported assemblies, compiling with imported namespace.

UNIT – III:

ASP.NET Web Forms: Web forms code model, In-page vs. Code-behind format, web form object life cycle, handling client side events on the server, web form event handling, define and respond web form control events, AutoPostBack property, automatic state management with web forms.

UNIT – IV

HTML sever control: definition, RunAt sever attribute, HTML control class, General controls-Anchor, image, form, division, span, Table control, Input Control.

Web server Control: Web Control class, General control- Hyperlink, link button, image, label, Panel, Form Controls, Table controls.

Text Book:

1. Michael Amundsen, Paul Litwin, “ASP.NET for developers”, SAMS Publishing.

Reference Books:

1. Bill Evjen, Scott Hanselman, Devin Rader, Farhan Muhammad, S. Srinivas Sivakumar, “Professional ASP.Net 2.0”, Wiley India Edition.
2. Joe Duffy, “Professional .Net Framework 2.0”, Wiley India Edition.

Note: In each theory paper, nine questions are to be set. Two questions are to set from each Unit and candidate is required to attempt one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT00622- Programming Using Visual Basic

L	T	P
2	0	2

UNIT – I

Visual Basic Overview: Creating a project in visual basic the parts of a visual basic project, visual basic programming conventions-variable scope prefixes, variable prefixes, control prefixes menu and constant prefixes, best coding practices in visual Basic- program design language, coding to get the most from visual basic.

UNIT – II

Visual Basic Language: Declaring constants, variable selecting variable types, converting between data types, setting variable scope, verifying data types declaring arrays and dynamic arrays,

Declaring subroutines, functions, preserving variable values between calls to their procedures, Handling strings, operators and operator precedence, if-else statements, select case, switch ( ) and choose, Looping.

UNIT – III

Managing forms in Visual Basic: The parts of a form the part of an MDI form Adding toolbar, status bar to the forms, working with multiple form loading, showing and hiding forms, setting the start up form, arrays of forms.

Coordinating data between MDI child from visual basic menus, command buttons, check boxes, List boxes and combo boxes, scroll bars and sliders, picture boxes and Image control.

UNIT – IV

File handling and file control, working with graphics, working with images, creating Active X controls and documents.

Text & Reference Books:

1. Steven Holzner, “Visual Basic 6 programming”, Black Book.
2. Anne Boehm, Mike Murach and Associates, “Murach's Visual Basic 2008”, Publisher of Professional Programming.

Note: In each theory paper, nine questions are to be set. Two questions are to set from each Unit and candidate is required to attempt one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT23 Introduction to Windows Operating System**

L	T	P
2	0	0

UNIT –I

Operating System Concepts: Operating System Classification- Simple Monitor, Multi Programming, Time Sharing, Real Time Systems, Multiprocessor Systems, Batch Processing, Simple User, Multi User, Operating System Functions And Characteristics.

UNIT –II

Exploring Windows 7 Operating System - Log On to Windows 7 Operating System, Explore the Desktop, Work with Windows, Use Windows Help and Support, Turn Off Personal Computers, Customize the Start Menu, Customize the Taskbar, Personalize the Desktop, Set a Screen Saver, Add Gadgets.

UNIT –III

Managing Folders and Files- Navigate to Folders with Windows Explorer, Work with Folders and Files, Copy Data on Storage Media, Renaming files and folders, Deleting files and folders, Views.

UNIT –IV

Windows Setting- Control Panels, Setting the date and Sound, Concept of menu Using Help, Using right Button of the Mouse, Creating Short cuts, Basics of Window Setup, Notepad, Window Accessories, Device manager, System restore.

Text & Reference Books:

1. James L. Peterson And Abraham Silberschatz, “Operating System Concepts”, Addison Wesley Publishing Company.

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BSCIT24 e-Commerce**

L	T	P
2	0	0

UNIT-I

e-Commerce: Definition, Framework, Architecture, benefits and Impact of e-Commerce, The Anatomy of e-Commerce application, e-Commerce Consumer applications, e-Commerce Organization Application, e-commerce in India, Prospects of e-Commerce.

UNIT-II

Consumer-oriented E-Commerce: Consumer-oriented applications, mercantile Process Models, consumer's perspective, Merchant's perspective. Advertising and marketing on the Internet: The new age information based marketing, Advertising on the Internet-Active or push-based advertising models, Passive or pull-based advertising models. Guidelines for Internet advertising. Online marketing process.

UNIT-III

Types of Electronic Payment System: Digital token-based electronic payment systems, smart cards and electronic payment systems, credit card-based electronic payment systems, Risk and electronic payment systems. Electronic data Interchange and its applications in business.

UNIT-IV

Securing the Business on Internet: security Policy, Procedures and Practices, transaction security, CRM, what is e-CRM, it's applications, The e-CRM marketing in India, Major Trends, Global Scenario for e-CRM, CRM utility in India.

Text & Reference Books:

1. Jeffrey F.Rayport & Bernard lJaworski: Introduction to E-commerce, TMH, 2003.
2. Kalakota & Winston: Frontiers of E-commerce, Pearson Education, Mumbai, 2002.
3. David Whiteley: E-Commerce- Strategy technologies and Applications, Tata Mac-Graw Hill, New Delhi, 2000.
4. C.S.V.Murthy: E-Commerce-Concepts, Models & Strategies, Himalaya Publishing house, Mumbai, 2003.
5. Kamalesh K Bajaj & Debjani Nag: E-Commerce, the Cutting Edge of Business- Tata McGraw-Hill, New Delhi, 2002.
6. Bharat Bhaskar: Electronic Commerce, Tata Mc-Graw-Hill, New Delhi, 2003.
7. Perry: E-Commerce, Thomson Publications, New Delhi,2003.
8. Elias M.Awad: Electronic Commerce, Prentice-Hall India, New Delhi, 2002.

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BSCIT25 Cyber Law**

L	T	P
2	0	0

UNIT – I

Cyber Law: Introduction, Definition, nature & Scope of Cyber Laws. Sociolegal Implications of Computer Science, Cyber Laws.
Cyber Crimes: Definition & Kinds of Cyber Crimes. International and Foreign Developments.

UNIT – II

Common Cyber Offences: Pheakering, Internet Frauds, Hackers, Stalking, E-Mail, Security Invasion, Money Laundering, Data-Diddling, Theft of Information.
Contractual Aspects: Hardware Contracts: User Requirement Specification, Negotiation, Sales & Leases, Delivery & Payment, Seller's Obligations, Buyer's Remedies.

UNIT – III

Software Contract: Selecting Software, Types of Software, What is Software, Software License, Principal Commercial Terms, Warranties, Software Maintenance.
Liability: Contractual Liability, Strict Liability, Negligence, Criminal.
Copyright & Patent Protection, Evidence, Protecting Confidential Information.

UNIT – IV

The Information Technology Act, 2000:
Introduction: Definition, A Brief Summary of the Act.
Digital Signature & Electronic Governance (Sections 3 to 10)
Secure Electronic Records & Secure Digital Signatures (Sections 14 to 16).

Text and Reference Books:

1. The Information Technology Act, 2000.
2. Chris Reed (Ed.), Computer Law, 1996: Universal Law Publishing Co. Pvt. Ltd.
3. Mittal D.P., Law of Information Technology (2000): Taxmann's.

Note: In each theory paper, nine questions are to be set. Two questions are to set from each Unit and candidate is required to attempt one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT26 Basic IT Skills**

L	T	P
2	0	1

Unit-I

Introduction & Installation (Linux & Windows), Libre Office Writer**,** Formatting, Typing.
Inserting objects & Inserting pictures, Viewing, Saving, Printing.

Unit - II

Calc- Introduction, How to works with cells, sheets, Formatting, Basic data manipulation, Working with data.
Impress- Introduction, Creating a presentation, Viewing a presentation (one lecture on presentation skills to enhance learning), Inserting pictures in document, Printing .

Unit - III

Firefox – Introduction, Interference & tool bars, Tab browsing, Setting preference.
K TUX Typing- Introduction, Customizing K touch, Configure settings, Tux typing, Introduction type, Advanced typing.

Unit - IV

Linux OS, Linux basics, Installation -10, Ubuntu desktop, Synaptic packet manager, Basic commands, GPU, File system, Working with regular files, File attributes, Redirection & pipes, Linux processes, Linux enviornment, Basic system administration, Simple filters.

Refer "spokentutorial.org" for online support and material.

Note: In each theory paper, nine questions are to be set. Two questions are to set from each Unit and candidate is required to attempt one question from each unit. Question number nine will be compulsory, which will be of short answer type with 5-10 parts, out of the entire syllabus. In all, five questions are to be attempted.

BSCIT27 Blender**

L	T	P
2	0	1

Unit - I

Introduction and Navigation- Introduction, Hardware Requirements, Installing in Windows, 3D cursor, Moving in 3D Space.

Unit -II

Blender Interface - Camera View, Basic Description, Change Window Types, File Browser and Info Panel Windows.

Unit- III

Window Properties- User Preferences Window, Outliner Window, Window Properties-1, Window Properties-2.

Unit - IV

More on Window Properties - Window Properties-3, Window Properties-4, Window Properties-5, Examples on Animation covering movie making etc.

Refer "spokentutorial.org" for online support and material.

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BSCIT28 GIMP**

L	T	P
2	0	1

Unit - I

Starting up with GIMP- Introduction & Installation (Linux & Windows), Image for Web, Setting up GIMP, Rotate and Corp the Image, Adjusting Colors in the Image, Healing and Cloning the image.

Unit-II

Tools in GIMP- Triptychs New Way, Drawing Tools, Sketching in GIMP, Brushes in GIMP.

Unit - III

Colors and Dialogs- Introduction to Colors and Dialogs, Curves Tool, Edits in the Image using GIMP, Drawing a Figure in GIMP.

Unit - IV

Image Resolutions- Image Resolutions, Fixed underexposed Images, Adjust Color with Curve tool, Easy Animations in GIMP, Comics, Selective Sharpening.

Refer "spokentutorial.org" for online support and material.

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BSCIT29 Java**

L	T	P
2	0	1

Unit-I

Basics Of Java- Getting started with Java installation, First Java Program, Installing Eclipse, Getting started with Eclipse, Hello world Program, Java using Eclipse -Errors and Debugging, Programming features in Eclipse, Arithmetic Operations, Numerical data types, Strings.

Unit -II

Java using Eclipse-II - Primitive type conversions, Relational Operators, Logical Operators, If- Else, Nested- If.
Statements and Loops - Switch Statement, For Loop, While Loop, Do- while.

Unit -III

Arrays, Class and Objects in Java- Introduction of Arrays, Array Operation Creating Class, Creating Object, Instance Fields.
Constructor- Methods in Java, Default Constructor, Parameterized, Constructor, Using this Key Word, Non-static Block.

Unit- IV

Overloading and Working with Netbeans - Constructor Overloading, Method Overloading, Taking User input using buffered reader, Developing Web Applications on Netbeans
Working with Netbeans - Integrating an Applet in a Web Applications, Netbeans Debugger, Handling Images in a Java GUI Applications, File chooser in Java Application, Connecting to MySQL database.

Refer "spokentutorial.org" for online support and material.

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