

Syllabus of B.Sc. (Computer Management) - Third Year

B.Sc. (CM).S5.1 Computer Networks

80 Marks

- | | | |
|-----------|---|-------------|
| 1. | Introduction | 7Hrs |
| 1.1 | Uses of computer Networks. | |
| 1.2 | Network Hardware- LAN,MAN,WAN. | |
| 1.3 | Wireless Networks. | |
| 1.4 | Network Software-Protocol Hierarchy, Design and Issues for Layer. | |
| 2. | Transmission Media and Network Topology | 8Hrs |
| 2.1 | Magnetic Media, Twisted Pair Cable, Coaxial Cable, Fibre optic cable. | |
| 2.2 | Network Topologies- Bus, Ring, Star, Tree and other Topologies. | |
| 2.3 | Advantages and limitations. | |
| 3. | Connection, Interfacing and Devices | 9Hrs |
| 3.1 | Connection oriented and connectionless services. | |
| 3.2 | Serial and Parallel connections. | |
| 3.3 | Half duplex and full duplex communication. | |
| 3.4 | Connectors – D and RJ-45. | |
| 3.5 | Networking Devices – Repeaters, Bridges , Routers ,Gateways , Hub and Switch. | |
| 4. | Multiplexing and Switching | 8Hrs |
| 4.1 | Concept of modulation and their application. | |
| 4.2 | Multiplexing – Time division and Frequency division | |
| 4.3 | Switching - Circuit Switching
- Packet Switching
- Message Switching. | |
| 5. | Network Standards and Network protocols | 9Hrs |
| 5.1 | OSI reference model. | |
| 5.2 | TCP/IP reference model. | |
| 5.3 | IP protocol,SMTP,PPP,FTP,HTTP,SNMP. | |
| 5.4 | IP-addresses | |
| 5.5 | Concept of DNS. | |

6. Internet

8Hrs

- 6.1 Definition , Internet verses Intranet.
- 6.2 Internet Service Providers.
- 6.3 E-mail – Architecture and Services.
- 6.4 WWW-Client side and Server side.
- 6.5 URL, Messenger, Search Engine.

Books Recommended :

- 1 Gerd E. Keiser” ,Local Area Networks” ,
Tata McGraw Hill Edition,New Delhi.
- 2 Peter Holdson, “Local Area Networks” ,(Third edition),
BPB publication,New Delhi.
- 3 Willim Stallings ”Data and Computer Communications” ,(Fifth Edition),
Prentice-Hall of India Pvt. Ltd,New Delhi.
- 4 Andrew S. Tannenbaum, ”Computer Networks” ,(Third Edition),
Prentice-Hall of India Pvt. Ltd,New Delhi.

Syllabus of B.Sc. (Computer Management) - Third Year

B.Sc. (CM).S5.2

Introduction to RDBMS through Oracle 8.0

80 Marks

- | | | |
|-----------|--|---------------|
| 1. | Introduction and Basic Concepts
Structure of DBMS
Advantages & Disadvantages
Relational and their schemes integrity rules
Relational algebra: Basic operations additional operations, relational algebraic operations.
Relational Calculus: Tuple Calculus domain calculus
Physical Implementation Issues | 7 Hrs. |
| 2. | Object Oriented Database
The Basic Parts of Speech in SQL
The basic Objects –Relational Database | 8 Hrs. |
| 3. | SQL and SQL * Plus`
Basic SQL PLUS Reports and Commands
Building a simple report
Checking the SQLPLUS Environment
Getting Text information
Data Types
How to cut and paste String
Group Value function
Dates
Conversion and transformation function
Advances sub queries, other joins | 7 Hrs. |
| 4. | Some Complex possibilities
Creating a complex view
Using sub queries within form clause
Using ROLLUP, GROUPING, And CUBE
Advances use of function and variables
DECODE: Amzing power in a singe word
Creating, Dropping and Altering tables Views | 6 Hrs. |

5.	Security and Management Using SQL	6 Hrs.
	Users roles and Privileges	
	What user can grant	
6.	PL/SQL	7 Hrs.
	An Introduction to PL/SQL	
	PL/SQL Overview	
	Declaration section	
	Executable Commands section	
	Condition logic	
	Loops	
	Exception Handlings	
	Triggers	
	Required System Privileges	
	Required Table Privileges	
	Types of triggers	
	Triggers Syntax	
	Enabling and Disabling Triggers	
	Replacing and Dropping Triggers	

Reference Books:

1. Bipin Desai “An introduction to Database system”, Gogotia publication NEW Delhi
2. Abraham S. Henry Korth S. Sudarshan “Database system Concepts” TMH
3. Kevin Lonely and George Koch “Oracle 8i the complete reference” TMH

Syllabus of B.Sc. (Computer Management) - Third Year

B.Sc. (CM).S5.3

Linux Operating System

50 Lectures

80 Marks

01.	Introduction to Fedora Features of Fedora Hardware Requirements Fedora Installation.	6 Hrs.
02.	First Steps with Fedora: Working with the Linux File System; Logging In to and Working with Linux; Changing User Information; Reading Documentation; Using the Shell; Using the Text Editors; Working with Permissions.	7 Hrs.
03.	Linux Commands and Utilities Add User, alias, at, banner, batch, bind, cat, cd, chmod, chown, chroot, cp, cpio, dc, dd, df, dir, du, dump, ex, fax, fc, find, finger, grep, zip, unzip, gzip, halt, hostname, isconfig, kill, locate, login, logout, look, lpc, lpd, lpr, lprm, ls, mail, mcopy, mdel, mdir, mformat, mkdir, mlevel, more, mount, mt, mv, netcft, netstat, passwd, ping, , ps, pwd, quota, quotaoff, rm , rmdir, set, shutdown, sort, stat, su, tar, tree, umount, unzip, vdir, vi, view, wc, who, whoami, xload, xset, zip,	8 Hrs.
04.	System Administration Performing system maintenance Communication commands - write, wall, talk, mesg, prelogin message, managing software with rpm : installing, uninstalling, upgrading managing users and groups with linux conf and control panel : adding users , changing user passwords and removing users	7 Hrs.
05.	Backup and Restore Backup strategies and operations Restoring files	Hrs.

06. Network Connectivity:

8 Hrs.

- i) Using Network Configuration Tools;
- ii) Dynamic Host Configuration Protocol;
- iii) Using the Network File System;
- iv) Putting Samba to Work;
- v) Introduction to DNS and Apache Web Server.

Reference Books:

1. **Red Hat Linux and Fedora Unleashed** – By Bill Ball and Hoyt Duff.
2. **Linux**. The Complete Reference.

Practical Work:

1. Introduction to Fedora Core;
2. Fedora Installation;
3. Simple Linux Commands:
alias, at, banner, cat, cd, chmod, chown, chroot, cp, dd, grep, gzip, gunzip, kill, ln, ls, mail, man, mcopy, mdel, mdir, more, ps, pwd, rm, rmdir, shutdown, sort, su, tar, unzip, vi, wc, who, whoami, zip.
4. Communication Commands:
write, wall, talk, mesg, motd.
5. Administration Commands:
adduser, cpio, fdformat, halt, hostname, ifconfig, login, logout, lpc, lpd, lprm, mount, mv, passwd, ping, quota, route, umount.
6. Network Installation:
 - i) DHCP Configuration;
 - ii) Network File System;
 - iii) Putting Samba to Work;
7. Shell Scripting;
8. Any ten Shell Programs.

Syllabus of B.Sc. (Computer Management) - Third Year

B.Sc. (CM).S5.4

E-Commerce

80 Marks

- | | | |
|-----------|--|---------------|
| 1. | Introduction to Electronic Commerce
Electronic Commerce
Electronic Data Interchange
Value Added Networks
Electronic Commerce over the Internet | 6 Hrs. |
| 2. | Electronic Communication
Electronic mail
Internet
Intranets | 7 Hrs. |
| 3. | EDI to E-Commerce
Electronic Data Interchange
The UN/EDIFACT Standards
Internet and Extranet for E-Commerce
Identification and Tracking tools for E-commerce | 8 Hrs. |
| 4. | Reengineering for Change
Business process reengineering
Management of change
Legal Issues | 6 Hrs. |
| 5. | E-Commerce Readlines
E-commerce in india
Getting started | 7 Hrs. |
| 6. | Internet Bandwidth and Technology Issues
Bandwidth Issues
Technology Issue for the Internet
ATM Technology
ATM/ FiberOptic Networks
High Capacity Storage Management | 8 Hrs. |

Books Recommended

E-Commerce- The Cutting Edge of Business By Kamelesh K Bajaj, Debjani Nag (TMH)

Syllabus of B.Sc. (Computer Management) - Third Year

B.Sc. (CM).S6.1 Multimedia Systems

80 Marks

- | | | |
|-----------|---|--------------|
| 1. | Introduction
CDROM and Multimedia Highway
Applications of Multimedia
Stages of Multimedia Project | 6Hrs. |
| 2. | Macintosh and Windows Productions Platforms
Macintosh Platform
Windows Platform
Connections- SCSI and IDE
Memory and Storage devices
Input and Output Devices | 7Hrs. |
| 3. | Basic Software Tools
Text editing and word Processing tools
Painting and drawing tools
Image Editing Tools
Sound Editing Tools | 8Hrs. |
| 4. | Text
Fonts and faces : Cases , Serif versus sanserif
Using text in multimedia
Computers and text
Font Editing and designing tools
Hypermedia nad Hypertext | 6Hrs. |
| 5. | Sound and Images
MIDI Versus Digital Audio
Digital audio
Audio file formats
Making Still Images : BITMAPS , Vector Drawing
Colors
Image file formats | 7Hrs. |

6. Animation and Video

8Hrs.

Principal of Animation

Making animation that work : Rolling Ball ,Bouncing ball

Using Video

Broadcast Video Standards

Recording Formats

References Books

1. Multimedia : Making it work (5th Editions) By Tay Vaughan (Tataamc)
2. Multimedia : Computing Communications and Applications By Ralf Steinmetz , Klara Nahrstedt

Syllabus of B.Sc. (Computer Management) - Third Year

B.Sc. (CM).S6.2 Communications Skills

80 Marks

-
- | | | |
|-----------|---|--------------|
| 1. | Communication
Definition, Types of Communication, Process of Communication, Barriers to communication.
Non Verbal Communication and Body Language | 6Hrs. |
| 2. | Oral Communication
Group Discussion.
Seminar & Conferences
Interviews
Meetings. | 7Hrs. |
| 3. | Phonetics
The organs of speech
Sounds - Vowels & Consonants
Syllable
Transcription of words
Word Accent | 7Hrs. |
| 4. | Situational English
Introduction & Greetings, Invitations, Thanking, Apologizing, Complementing,
Making enquiries, Speaking on the Telephone, Making suggestions, Making
Complaints, Requesting, etc. | 8Hrs. |
| 5. | Personality Development
Interpersonal Skills.
Definition & meaning
Working in a team
Negotiating
Development of Good Interpersonal Skills
Leadership
Concept & Types
Qualities of Leadership | 8Hrs. |

Functions of Leadership

Conflict Management

Concept of Conflict

Causes of Conflict

Intra - individual conflict.

Inter - individual conflict

Strategies for conflict resolution.

Recommended Reading

1. Developing communication skills :- By Krishna Mohan & Meera Banerji
Birla Institute of Technology and Science, Pilani , Rajasthan.
2. Spoken English by M Sarada
A.P.H. Publishing Corporation Ansari Road, Darya Ganj, New Delhi- 110002.
3. Personality Development by Dr. T.Bharathi,
Neelkamal Publications Pvt. Ltd. Sultan Bazar, Hyderabad - 500095.

Syllabus of B.Sc. (Computer Management) - Third Year

B.Sc. (CM).S6.3 Active Server Pages

80 Marks

1.	Web Publishing	5 Hrs
1.1	Basic HTML Concepts	
1.2	HTML: Structured Language	
1.3	Web Browser	
1.4	WWW	
1.5	Web Server	
1.6	The Phases of web site development Implementation, Maintenance, Testing	
2.	HTML Documents	10 Hrs
2.1	Structure of HTML Documents Html, Head, Title, Body Tags	
2.2	The Markup Tags Heading Styles Formatting Text List Styles Line Breaks Paragraphs, Div	
2.3	Including Images in the documents	
2.4	Introduction to Hyper linking The Anchor Tag Anchor tags and Images	
2.5	Formatting Table Table, Table Rows, Table Data Tags Table Header and Footer tags	
2.6	Frames	
2.7	The Form Tag Action and Method attributes Controls : Text Fields, Check Boxes, Option Buttons, Submit Buttons, List Boxes, Password Fields	
3.	Getting Started with ASP	4 Hrs
3.1	What is Dynamic Web Page? Using Dynamic Web Page.	
3.2	Installing and Configuring IIS 5.0	
3.3	The Microsoft Management Console (MMC)	
3.4	Testing Web Server	

4.	Client Side Scripting and Server Side Scripting	3 Hrs
4.1	How do web server works	
4.2	Client side Scripting	
	Writing Client Side Scripts	
	A Client Side Script Using VB Script	
	A Client Side Script Using Java Script	
	Advantage and Disadvantage of Client Side Scripting	
4.3	Server Side Script	
	Writing Server Side Scripts	
5.	Basic ASP Techniques	2 Hrs
5.1	Getting Information from the User	
5.2	Using the Information obtained from the User	
5.3	A Simple Example	
6.	Variables	3 Hrs
6.1	Creating Variable	
6.2	Data types in VBScript	
6.3	Declaring Variable	
6.4	Option Explicit	
6.5	Arithmetic and Comparison Operator	
6.6	Constants & String Manipulation	
6.7	Arrays	
7.	ASP Control Structure	3 Hrs
7.1	Branching Structure	
	If...Then	
	Select Case	
7.2	Looping Structure	
	For...Next, For Each Next	
	Do While	
	Do Loop While	
7.3	Jumping Statement	
	Procedures	
	Functions	
8.	The Request and Response Objects	5 Hrs
8.1	Sending Information to the Server	
8.2	Sending Information back to the Client	
	Write Method	
8.3	The Request Object Collection :	
	QueryString, Forms, Server Variable, Client Certificate	
8.4	The Response Object	
	Controlling Information	

	Content Expiration	
	Redirection	
8.5	Server.Execute and Server.Transfer	
9.	Application, Session and Cookies	4 Hrs
9.1	Using Cookies	
	Making and Deleting Cookies	
9.2	The Application Objects	
	Application Variable	
	Application Object Collection	
	Application Object Methods	
9.3	The Session Object	
	Session Object Collection	
	Session Object Properties	
	Session Object Methods	
10.	ASP and Data Store Access	6 Hrs
10.1	Universal Data Access	
10.2	ODBC, OLE-DB, ADO	
10.3	Getting Data	
	Microsoft Access (.mdb) files	
	Microsoft SQL Server / MSDE (.mdf) files	
10.4	What is Connection	
	Connection String	
	Data Link File	
	Data Source Names	
10.5	Connection Object	
	Opening a Connection	
	Closing a Connection	
	Using Recordsets	
10.6	The Recordset Object	
10.7	Creating a Recordset using explicit Connection Object	
10.8	ADO Constants	
10.9	Active Connection	
10.10	Using Recordset Object	
	BOF and EOF Properties	
	Moving through Records	
	Finding Record	

Reference Books

1. Beginning ASP 3.0 by David Buser, John Kauffman, (Wrox)
2. Mastering Active Server pages 3 By A Russell Jones (BPB)
3. WEB PUBLISHING BY MONICA D' SOUZA & JUDE D' SOUZA
4. COMPLETE REFERENCE - HTML - TOWELL