SRM UNIVERSITY
(Under section 3 of UGC Act 1956)

DEPARTMENT OF COMPUTER APPLICATIONS

B.C.A. - THIRD YEAR
(2011-2012 REGULATION)

SIXTH SEMESTER

LESSON PLAN

SRM UNIVERSITY

FACULTY OF SCIENCE AND HUMANITIES

SRM NAGAR, KATTANKULATHUR – 603 203

Semester	Course Code	Course Title	L	P	C
VI	COA1161	**OPEN SOURCE TECHNOLOGIES**	5	0	4

LAMP [Linux, Apache, MySql, PHP]

Unit I

Introduction: Open Source – Open Source vs. Commercial Software – What is Linux? - Free Software – Where I can use Linux? Linux Kernel – Linux Distributions

Unit II

Introduction: Linux Essential Commands – Files System Concept – Standard Files – The Linux Security Model – Vi Editor – Patitions creation – Shell Introduction – String Processing – Investigating and Managing Processes – Network Clients – Installing Application

Unit III

Introduction **–** Apache Explained – Starting, Stopping, and Restarting Apache – Modifying the Default Configuration – Securing Apache – Set User and Group – Consider Allowing Access to Local Documentation – Don't Allow public_html Web sites – Apache control with .htaccess

Unit IV

Introduction to MY SQL **–** The Show Databases and Table – The USE command – Create Database and Tables – Describe Table – Select, Insert, Update, and Delete statement – Some Administrative detail – Table Joins – Loading and Dumping a Database.

Unit V

PHP Introduction- General Syntactic Characteristics – PHP Scripting – Commenting your code – Primitives, Operations and Expressions – PHP Variables – Operations and Expressions Control Statement – Array – Functions – Basic Form Processing – File and Folder Access – Cookies – Sessions – Database Access with PHP – MySQL – MySQL Functions – Inserting Records – Selecting Records – Deleting Records – Update Records.

REFERENCES:

I James Lee and Brent Ware, “Open Source Web Development with LAMP using Linux, Apache,MySQL, Perl and PHP”.

II Stan, Peter and Marie Klimas, "LINUX NEWBIE ADMINISTRATOR GUIDE"

LESSON PLAN

Subject Name: **OPEN SOURCE TECHNOLOGIES**
Subject Code: **COA1161**

UNIT I		
Lecture Hour	**Description**	**Reference with chapter**
1	Introduction	TB : I Introduction I.1
2	Open Source	TB : I Introduction I.2
3	Why Linux	TB : II Chapter 1.1
4	Benefits of Linux	TB : II Chapter 1.4
5	Open source Vs commercial software	TB : II Chapter 1.5
6	What is Linux	TB : II Chapter 1.3
7	Where I can use Linux?	online resource
8	Linux Kernel	online resource
9	Linux Architecture	online resource
10	Linux distributions	TB : I chapter 2.1.1
11	Which Linux distributions should I use?	TB : II chapter 2.1.1
12	Download and Install	TB : I chapter 2.1.2
13	Linux partition sizes	TB : I chapter 2.1.4

UNIT II		
Lecture Hour	**Description**	**Reference with chapter**
14	Introduction	TB : II chapter 3.1
15	Linux basic commands	TB : II chapter 5.1
16	basic operations	TB : II chapter 5.3
17	Linux essential commands	TB : I chapter 2.2.5
18	File system concept	TB : I chapter 2.2.8
19	Standard files	online resource
20	file management	TB : II chapter 5.5
21	viewing and editing files	TB : II chapter 5.6
22	Finding files	TB : II chapter 5.7
23	Vi editor	TB : II chapter 7.1

24	Introduction to shell	TB : I chapter 2.2.1
25	Simple shell script	TB : II chapter 3.4.5
26	Permission and ownership	TB : I chapter 2.2.2
27	String Processing	TB : II chapter 7.1
28	Managing processes	TB : I chapter 2.2.3
29	Network clients	TB : II Chapter 5.17
30	Installing applications	TB : II chapter 5.15

UNIT III		
Lecture Hour	**Description**	**Reference with chapter**
31	Introduction	TB : I chapter 3.1
32	Apache explained	TB : I chapter 3.1.1
33	Starting , stopping and restarting Apache	TB : I chapter 3.2
34	Modifying the default configuration	TB : I chapter 3.3.1
35	Securing Apache	TB : I chapter 3.4
36	Set user and group	TB : I chapter 3.4.1
37	Consider allowing access to local documentation	TB : I chapter 3.4.3
38	Remove online manuals	TB : I chapter 3.4.2
39	Don’t allow public html	TB : I chapter 3.4.4
40	.htaccess	TB : I chapter 3.4.5
41	remove server status and server info	TB : I chapter 3.4.6
42	Access control with .htaccess	TB : I chapter 3.6.1

UNIT IV		
Lecture Hour	**Description**	**Reference with chapter**
43	Introduction to MY SQL	TB : I chapter5.1
44	The Show Databases and Table	TB : I chapter5.2.1
45	The USE command	TB : I chapter5.2.2
46	Create Database and Tables	TB : I chapter5.2.3
47	Describe Table	TB : I chapter5.2.4
48	The INSERT Command	TB : I chapter5.2.5
49	The SELECT Command	TB : I chapter5.2.6

50	The UPDATE Command	TB : I chapter5.2.7
51	The DELETE Command	TB : I chapter5.2.8
52	Some Administrative detail	TB : I chapter5.2.9
53	Table Joins	TB : I chapter5.4
54	Loading and Dumping a Database	TB : I chapter5.5

UNIT V		
Lecture Hour	**Description**	**Reference with chapter**
55	PHP Introduction	TB : I chapter 12.1
56	General Syntactic Characteristics	TB : I chapter 12.2
57	PHP Scripting	TB : I chapter 12.3
58	Commenting your code	TB : I chapter 12.4
59	Primitives	Online Resource
60	PHP Variables	TB : I chapter 12.5.1
61	Operations and Expressions	TB : I chapter 12.5.4
62	Control Statement	TB : I chapter 12.5.5
63	Array	TB : I chapter 12.6.2
64	Functions	TB : I chapter 12.6
65	Basic Form Processing	TB : I chapter 12.6.4
66	File and Folder Access	Online Resource
67	Cookies	Online Resource
68	Sessions	Online Resource
69	Database Access with PHP	TB : I chapter 12.7
70	MySQL	TB : I chapter 12.7.1
71	MySQL Functions	TB : I chapter 12.7.2
72	Inserting Records	TB : I chapter 12.7.3
73	Selecting Records	TB : I chapter 12.7.3
74	Deleting Records	TB : I chapter 12.7.3
75	Update Records	TB : I chapter 12.7.3

Semester	Course Code	Course Title	L	P	C
VI	COA1162	**.NET PROGRAMMING**	5	0	4

Unit I: VB.NET FUNDAMENTALS

Introduction to .NET Framework - Controls – Menus and Dialog Boxes – Variables and Operators – Decision Structures – Loops and Timers - Debugging - Trapping and Handling Errors

Unit II: VB.NET PROGRAMMING:

Modules and Procedures – Arrays and Collections – Exploring Text Files and String Processing – Automating Microsoft Office Applications – Deployment of VB.NET Applications.

Unit III: Class and objects:

Types, Structures and Enumerations – Classes – Interfaces – Exceptions: Handling and Classes

Unit IV: Advanced Design Concepts:

Patterns, Roles and Relationships – Advanced Interface Patterns: Adapters, Delegates and Events – Data Processing and I/O.

Unit V: VB.NET UI DESIGN AND DATABASE APPLICATIONS:

Windows Forms – Graphics and Animation - Inheriting Forms and Creating Base Classes – Working with Printers – ADO.NET – Data Grid Control

REFERENCES:

1. Visual Basic.NET, Michael Halvorson, Prentice Hall of India, New Delhi, 2002. [For Units I, II and V]
2. Visual Basic .Net – The Complete Reference, Jeffrey R. Shapiro, Osborne, 2002.

LESSON PLAN

Subject Name: **.NET PROGRAMMING**
Subject Code: **COA1162**

UNIT I		
Lecture Hour	**Description**	**Reference with chapter**
1	Introduction to .NET Framework	TB : 1 – Chapter 1
2	Controls	TB : 1 – Chapter 3
3	The Basic Use of Controls	TB : 1 – Chapter 3
4	Controls for Gathering Input	TB : 1 – Chapter 3
5	Menus and Dialog Boxes	TB : 1 – Chapter 4
6	Adding Menus by Using the *MenuStrip* Control	TB : 1 – Chapter 4
7	Variables and Operators	TB : 1 – Chapter 5
8	Decision Structures	TB : 1 – Chapter 6
9	*If . . . Then* Decision Structures .	TB : 1 – Chapter 6
10	*Select Case* Decision Structures	TB : 1 – Chapter 6
11	Loops and Timers	TB : 1 – Chapter 7
12	*For . . . Next* Loops *Do* Loops	TB : 1 – Chapter 7
13	Debugging Visual Basic Programs	TB : 1 – Chapter 8
14	Trapping and Handling Errors	TB : 1 – Chapter 9

UNIT II		
Lecture Hour	**Description**	**Reference with chapter**
15	Modules and Procedures	TB : 1 – Chapter 10
16	Creating a Module	TB : 1 – Chapter 10
17	Function Procedures	TB : 1 – Chapter 10
18	Arrays and Collections	TB : 1 – Chapter 11
19	Creating an Array	TB : 1 – Chapter 11
20	Working with Array Elements	TB : 1 – Chapter 11
21	Working with Object Collections	TB : 1 – Chapter 12
22	Exploring Text Files and String Processing	TB : 1 – Chapter 13
23	Reading Text Files	TB : 1 – Chapter 13
24	Writing Text Files	TB : 1 – Chapter 13
25	Sorting Text	TB : 1 – Chapter 13
26	Automating Microsoft Office Applications	TB : 1 – Chapter 13
27	Deployment of VB.NET Applications.	TB : 1 – Chapter 13

UNIT III		
Lecture Hour	**Description**	**Reference with chapter**
28	Types, Structures and Enumerations	TB : 2 – Chapter 8
29	Structures	TB : 2 – Chapter 8
30	Enumerations	TB : 2 – Chapter 8
31	The Object−Reference Model	TB : 2 – Chapter 8
32	Classes	TB : 2 – Chapter 9

33	Modeling.. Modularity	TB : 2 – Chapter 9
34	Inheritance	TB : 2 – Chapter 9
35	Interfaces	TB : 2 – Chapter 10
36	Implicit Interfaces	TB : 2 – Chapter 10
37	Explicit Interfaces	TB : 2 – Chapter 10
38	Implementing Interfaces	TB : 2 – Chapter 10
39	Exceptions: Handling and Classes	TB : 2 – Chapter 11
40	Exception−Handling Models	TB : 2 – Chapter 11
41	Recovering from Exceptions	TB : 2 – Chapter 11
42	Exception Statements	TB : 2 – Chapter 11

UNIT IV		
Lecture Hour	**Description**	**Reference with chapter**
43	Patterns, Roles and Relationships	TB : 2 – Chapter 13
44	Designs on Classes	TB : 2 – Chapter 13
45	Singleton	TB : 2 – Chapter 13
46	Bridge	TB : 2 – Chapter 13
47	Advanced Interface Patterns: Adapters, Delegates and Events	TB : 2 – Chapter 14
48	Adapters and Wrappers	TB : 2 – Chapter 14
49	Delegates.	TB : 2 – Chapter 14
50	Sorting Data with Delegates	TB : 2 – Chapter 14
51	Data Processing and I/O	TB : 2 – Chapter 15
52	Working with Strings	TB : 2 – Chapter 15
53	Members of the String Class	TB : 2 – Chapter 15
54	String Formatting	TB : 2 – Chapter 15
55	Building Strings with StringBuilder	TB : 2 – Chapter 15
56	Regular Expressions	TB : 2 – Chapter 15

UNIT V		
Lecture Hour	**Description**	**Reference with chapter**
57	Windows Forms	TB : 1 – Chapter 14
58	Adding New Forms to a Program	TB : 1 – Chapter 14
59	Working with Multiple Forms	TB : 1 – Chapter 14
60	Adding Controls to a Form at Run Time	TB : 1 – Chapter 14
61	One Step Further: Specifying the Startup Object	TB : 1 – Chapter 14
62	Graphics and Animation	TB : 1 – Chapter 15
63	the *System.Drawing* Namespace	TB : 1 – Chapter 15
64	Adding Animation to Your Programs	TB : 1 – Chapter 15
65	Inheriting Forms and Creating Base Classes	TB : 1 – Chapter 16
66	Inheriting a Form by Using the Inheritance Picker	TB : 1 – Chapter 16
67	Creating Your Own Base Classes	TB : 1 – Chapter 16
68	Working with Printers	TB : 1 – Chapter 17
69	Using the *PrintDocument* Class .	TB : 1 – Chapter 17
70	Printing Multipage Text Files	TB : 1 – Chapter 17

71	ADO.NET	TB : 1 – Chapter 18
72	Database Programming with ADO.NET	TB : 1 – Chapter 18
73	Database Information	TB : 1 – Chapter 18
74	Data Grid Control	TB : 1 – Chapter 19
75	Using *DataGridView* to Display Database Records	TB : 1 – Chapter 19

Semester	Course Code	Course Title	L	P	C
VI	COA1163	**CRYPTOGRAPHY AND NETWORK SECURITY**	5	0	5

Unit I

Overview – Symmetric Ciphers: Classical Encryption Techniques

Unit II

Symmetric Ciphers: Block ciphers and Data Encryption Standards. Public-key encryption and Hash Functions: Public-Key Cryptography and RSA

Unit III

Network Security Practices: Authentication applications – Electronic Mail Security

Unit IV

Network Security Practices: IP Security – Web security

Unit V

System Security: Intruders – Malicious Software – Firewalls

BOOK FOR STUDY

1. William Stallings, "Cryptography and Network Security – Principles and Practices', Prentice-Hall, Third edition, 2003

REFERENCES:

1. Johannes A, Buchanan, "Introduction to cryptography", Springer-Verlag
2. Atul kahate, "Cryptography and Network Security". TMH

LESSON PLAN

Subject Name: **CRYPTOGRAPHY AND NETWORK SECURITY**
Subject Code: **COA1163**

UNIT I		
Lecture Hour	**Description**	**Reference with chapter**
1	Overview: Introduction about information security	Chapter 1:1.1
2	Types of information security	Chapter 1:1.1
3	Security attacks: Types of attacks General categories, security services: Authentication, access control, data Confidentiality, Integrity.	Chapter 1:1.3,1.4
4	Security Mechanisms: Encipherment, Digital signature	Chapter 1:1.5
5	A model for network security: basic task, Kinds of threats	Chapter 1:1.6
6	Network Access Security Model.	Chapter 1:1.6
7	Symmetric Ciphers: Symmetric cipher model	Chapter 2:2.1
8	Types, Requirements, Five key elements of symmetric ciphers, Model for conventional cryptosystem	Chapter 2:2.1
9	What is Cryptography, characteristics and cryptanalysis, attacks	Chapter 2:2.1
10	Classical Encryption Techniques: substitution techniques and Transposition Technique.	Chapter 2:2.2
11	Substitution Technique: Caesar Cipher, Monoalphabetic Cipher, Polyalphabetic Cipher	Chapter 2:2.2
12	Playfair Cipher, Hill Cipher, Padding	Chapter 2:2.2
13	Transposition Techniques: Rotor machine Technique and Stenography technique.	Chapter 2:2.3,2.4,2.5

UNIT II		
Lecture Hour	**Description**	**Reference with chapter**
14	Block ciphers and Data Encryption Standards: Block cipher and its principles, Stream Ciphers	Chapter 3:3.1
15	Feistel Cipher Structure: Block size, key size, number of rounds,	Chapter 3:3.1
16	Feistel Cipher structure(Cont.):sub key generation algorithm,	Chapter 3:3.1
17	Classical Feistel Network :Encryption and Decryption algorithm	Chapter 3:3.1
18	Data Encryption standards: General description of DES Encryption Algorithm	Chapter 3:3.2

19	Permutation table for DES	Chapter 3:3.2
20	Single round of DES algorithm	Chapter 3:3.2
21	Key generation, s-boxes,DES Decryption	Chapter 3:3.2
22	Public Encryption: Introduction to Number Theory: prime numbers, Fermat's and Euler's Theorems	Chapter 8:8.1,8.2
23	Testing for primarily, Chinese remainder theorem and discrete logarithms	Chapter 8:8.3,8.4,8.5
24	Public key cryptography: Principles of Public-key Cryptosystems	Chapter 9:9.1
25	RSA algorithm	Chapter 9:9.2
26	Hash Functions: Authentication Requirements, Authentication functions	Chapter 11:11.1,11.2
27	Message authentication codes, Hash functions	Chapter 12:11.3,11.4
28	Security of Hash functions	Chapter 12:12.1
29	Secure Hash algorithm-MAC	Chapter 12:12.3,12.4
30	Digital Signature and Authentication protocols	Chapter 13:13.1,13.2
31	Digital signature standards	Chapter 13:13.3

UNIT III		
Lecture Hour	**Description**	**Reference with chapter**
32	Network Security Practices: Kerberos and Requirements	Chapter 14:14.1
33	Kerbros Version4	Chapter 14:14.1
34	Client/Server authentication Exchange	Chapter 14:14.1
35	Kerbros version 5	Chapter 14:14.1
36	X.509 Authentication Service	Chapter 14:14.2
37	X.509 Certificates	Chapter 14:14.2
38	X.509 formats	Chapter 14:14.2
39	X.509 Authentication Procedures	Chapter 14:14.2
40	Public key Infrastructure	Chapter 14:14.3
41	Management functions: PKIX	Chapter 14:14.3
42	Electronic Mail Security: PGP	Chapter 15:15.1
43	PGP services, PGP Cryptographic functions	Chapter 15:15.1
44	Public key management	Chapter 15:15.1
45	S/MIME Overview, mail extension	Chapter 15:15.2
46	S/MIME Functionality	Chapter 15:15.2

UNIT IV		
Lecture Hour	**Description**	**Reference with chapter**
47	Network Security Practices: IP Security Overview	Chapter 16:16.1
48	IP security Architecture : Ip sec Documents, security associations	Chapter 16:16.2
49	Transport and Tunnel Modes	Chapter 16:16.2
50	Authentication Header: Anti replay service	Chapter 16:16.3
51	Authentication Header: Integrity check value	Chapter 16:16.3
52	Encapsulating Security Payload	Chapter 16:16.4
53	Transport Mode ESP	Chapter 16:16.4
54	Tunnel Mode ESP	Chapter 16:16.4
54	Combining Security Association	Chapter 16:16.5
56	Key management	Chapter 16:16.6
57	Oakley Key determination protocol, features and exchange	Chapter 16:16.6
58	Web security: web security considerations	Chapter 17:17.1
59	Secure Socket layer and transport layer security	Chapter 17:17.2
60	SSL Record Protocol, change Cipher spec Protocol	Chapter 17:17.2
61	Alter protocol, Handshake protocol	Chapter 17:17.2
62	Transport layer security	Chapter 17:17.2
63	Secure Electronic Transaction	Chapter 17:17.3
64	payment processing & Payment Authorization	Chapter 17:17.3

UNIT V		
Lecture Hour	**Description**	**Reference with chapter**
65	System Security: Intruders, Intrusion Techniques	Chapter 18:18.1
66	Intrusion Techniques and detection	Chapter 18:18.2
67	Password Management	Chapter 18:18.3
68	Malicious software :Virus and related Threats	Chapter 19:19.1
69	Virus Countermeasures	Chapter 19:19.2
70	Distributed Denial of Service Attacks	Chapter 19:19.3
71	Firewalls: Firewall Design Principles, Characteristics	Chapter 20:20.1
72	Types of Firewalls	Chapter 20:10.2

73	Firewall Configurations	Chapter 20:20.2
74	Trusted Systems: Data access control	Chapter 20:20.2
75	Concept of Trusted system, Trojan Horse defense.	Chapter 20:20.3

Semester	Course Code	Course Title	L	P	C
VI	COA11E5	**E – COMMERCE**	5	0	5

Unit I: INTRODUCTION

History of E- Commerce - Overview of E- Commerce framework - E- Business models - Network infrastructure - Role of Internet - E- commerce and World wide Web.

Unit II: E-COMMERCE

Consumer oriented E- Commerce applications - Mercantile process models ; Electronic Payment Systems - Digital Token based EPS - Smart cards - Credit cards - Risks - designing EPS.

Unit III: ORGANIZATIONAL COMMERCE AND EDI

Electronic Data Interchange - EDI applications in Business - EDI and e Commerce - EDI standardization and implementation - Internet based EDI.

Unit IV: SECURITY

Internet security standards - secure electronic payment protocols ; cryptography and authentication - security issues - encryption techniques; e commerce payment mechanisms -SET protocol - electronic check - electronic cash; E-commerce ethics, regulations and social responsibility.

Unit V: INTELLIGENT AGENTS

Definition and capabilities - limitation of agents - security - web based marketing - search engines and Directory registration - online advertisements - Portables and info mechanics - website design issues.

BOOKS FOR STUDY

1. Ravi Kalakota and Andrew B Whinston, "*Frontiers of Electronic Commerce*", Pearson Education Asia, 1999.(Chapters 1,2,3,6-10,16)
2. Marilyn Greenstein and Todd M Feinman , "*Electronic commerce: Security, Risk Management and Control*" Tata McGraw-Hill, 2000.(Chapters 7,8,10-12)

REFERENCE BOOKS

1. Judy Strauss and Raymond Frost , "*E Marketing*", PHI, 2002
2. Brenda Kienan , "*Managing e Commerce Business*" , PHI,2001
3. Vivek Sharma and Rajiv Sharma , "*Developing e Commerce Sites - an integrated approach*" , Pearson Education Asia, 2000

ONLINE REFERENCES

1. http://www.techtutorials.info/ecommerce.html (Unit-1,2)
2. http://en.wikipedia.org/wiki/Electronic_data_interchange (Unit-3)
3. http://cs.anu.edu.au/student/comp3410/lectures/security/symmetric-4up.pdf (Unit-4)
4. http://www.cs.berkeley.edu/~russell/aimale/chapter02.pdf (unit-5)

LESSON PLAN

Subject Name: **E – COMMERCE**
Subject Code: **COA11E5**

UNIT I		
Lecture Hour	**Description**	**Reference with chapter**
1	History of e-commerce	Net resource
2	Over view of E-Commerce frame work	TB : I chapter1.1
3	E-Business Models	Net resource
4	Network infrastructure : Market Forces	TB : I chapter 2.1
5	Components of the I-way,Network Access Equipment	TB : I chapter 2.2-2.3
6	The Last Mile,Global information distribution network	TB : I chapter 2.4-2.5
7	Public Policy Issues	TB : I chapter 2.6
8	Role of Internet : The internet Terminology	TB : I chapter 3.1
9	History of internet	TB :I chapter 3.2
10	NSFNET: Architecture and Components	TB : I chapter 3.3
11	Internet Governance	TB : I chapter 3.5
12	E-Commerce and www : Frame work	TB : I chapter 6.1
13	Web Background	TB : I chapter 6.3
14	Technology behind web	TB : I chapter 6.4
15	Security and the web	TB : I chapter 6.5

UNIT II		
Lecture Hour	**Description**	**Reference with chapter**
16	Introduction	TB : I chapter 7
17	Consumer - Oriented Applications	TB : I chapter 7.1
18	(Contd)Consumer - Oriented Applications	TB : I chapter 7.1
19	Mercantile process models	TB : I chapter 7.2
20	Consumer's perspective	TB : I chapter 7.3
21	(Contd)Consumer's perspective	TB : I chapter 7.3
22	Merchant's perspective	TB : I chapter 7.4
23	(Contd)Merchant's perspective	TB : I chapter 7.4
24	Types of Electronic Pament System, Digital Token Based EPS	TB : I chapter 8.1-8.2
25	(Contd)Digital Token Based EPS	TB : I chapter 8.2
26	Smart cards and EPS	TB : I chapter 8.3
27	Credit card-Based EPS	TB : I chapter 8.4
28	Risk and EPS	TB : I chapter 8.5
29	Designing EPS	TB : I chapter 8.6
30	(Contd)Designing EPS	TB : I chapter 8.6

UNIT III		
Lecture Hour	**Description**	**Reference with chapter**
31	Introduction	TB : I chapter 9.1
32	Electronic Data Interchange	TB : I chapter 9.1
33	EDI Applications in Business	TB : I chapter 9.2
34	(Contd)EDI Applications in Business	TB : I chapter 9.2
35	EDI: Legal,Security and Privacy Issues	TB : I chapter 9.3
36	(Contd)EDI: Legal,Security and Privacy Issues	TB : I chapter 9.3
37	EDI and Electronic Commerce	TB : I chapter 9.4
38	(Cond)EDI and Electronic Commerce	TB : I chapter 9.4
39	Standardization and EDI	TB : I chapter 10.1
40	(Contd)Standardization and EDI	TB : I chapter 10.1
41	EDI Software Implementation	TB : I chapter 10.2
42	(Contd)EDI Software Implementation	TB : I chapter 10.2
43	EDI Envelope for Message Transport	TB : I chapter 10.3
44	Value-Added Networks(VANs)	TB : I chapter 10.4
45	Internet -Based EDI	TB : I chapter 10.5

UNIT IV		
Lecture Hour	**Description**	**Reference with chapter**
46	Introduction	TB : II chapter 7
47	Internet Security Standards	TB : II chapter 7
48	Secure Electronic Payment Protocols	TB : II chapter 7
49	(Contd)Secure Electronic Payment Protocols	TB : II chapter 7
50	(Contd)Secure Electronic Payment Protocols	TB : II chapter 7
51	Cryptography and Authentication	TB : II chapter 8
52	(Contd)Cryptography and Authentication	TB : II chapter 8
53	Messaging Security Issues	TB : II chapter 8
54	(Contd)Messaging Security Issues	TB : II chapter 8
55	Encryption Techniques	TB : II chapter 8
56	(Contd)Encryption Techniques	TB : II chapter 8
57	Electronic Commerce Payment Mechanisms	TB : II chapter 9
58	(Contd)Electronic Commerce Payment Mechanisms	TB : II chapter 9
59	The SET Protocol	TB : II chapter 9
60	(Contd)The SET Protocol	TB : II chapter 9
61	(Contd)The SET Protocol	TB : II chapter 9
62	Electronic Checks	TB : II chapter 9
63	Electronic Cash	TB : II chapter 9
64	ECom ethics, regulation and social responsibility	Net resource

UNIT V		
Lecture Hour	**Description**	**Reference with chapter**
65	Introduction	TB : II chapter 11
66	Definition of Intelligent Agents	TB : II chapter 11
67	Capabilities of Intelligent Agents	TB : II chapter 11
68	Limitations of Agents	TB : II chapter 11
69	Agents and Security	TB : II chapter 11
70	Web Based Marketing	TB : II chapter 12
71	Internet Marketing Techniques	TB : II chapter 12
72	(Contd)Internet Marketing Techniques	TB : II chapter 12
73	Search Engines and Directory Registration	TB : II chapter 12
74	Online Advertising Mechanisms	TB : II chapter 12
75	Web Site Design Issues	TB : II chapter 12