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M.C.A. (Commerce)

Part 'III' Sem 'V'

w.e.f. 2011-12

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MCA (Comm.) Sem-V

501 : Content Management System

Objectives :-

1. To learn structure and functionality of content.
2. How to create pages, creating navigation.
3. To learn principle of moodle and understanding content management.

Chapter No.	Name Of Topic	No. of Lectures
1	Defining Data, Information, and Content 1.1 What is Data? 1.2 Content Is Not Data 1.3 Content Is Information Put to Use 1.4 Content Is Information Plus Data 1.5 From Data to Content and Back	3
2	Content Has Format, Structure & Functionality 2.1 Storage Format: Storing Information 2.2 Rendering Format: Presenting Information 2.3 Categorizing Formatting 2.3.1 Formatting for effect 2.3.2 Formatting by method 2.3.3 Formatting by scope 2.4 Structure Is Important 2.5 How to Categorize Structure 2.5.1 Structure by purpose 2.5.2 Structure by type 2.5.3 Structure by scope 2.6 What Is Functionality? 2.7 Monolithic versus Mix-and-Match Functionality	4
3	But What Is Content Really? 3.1 Content, Context, and Meaning 3.2 Creating Context Rules 3.3 Content Organization Starts with Purpose 3.4 Content Is Named Information Jena : http://jena.sourceforge.net/ARQ/arc-query-eval.html	3
4	Creating Pages and Navigation (Web management) 4.1 Creating pages 4.2 Editing pages 4.2.1 Previewing changes 4.2.2 Changing the page alias 4.2.3 Deleting pages 4.2.4 Formatting page content 4.3 Activating search & replace function 4.3.1 Adding meta tags 4.3.2 Adding global meta tags 4.4 Understanding page hierarchy	6

	<p>4.4.1 Adding sub pages to a website 4.4.2 Usability 4.4.3 Search engine friendly URL's</p> <p>4.5 Controlling the navigation of the website 4.5.1 Home Page/Default page of web site 4.5.2 More navigation control with content types 4.5.3 Creating new pages as a copy of existing one 4.5.4 Changing multiple pages at once</p>	
5	<p>Design and Layout</p> <p>5.1 Working with templates 5.1.1 Importing readymade template 5.1.2 Creating new template 5.1.3 Adding dynamic parts to template 5.1.4 Adding smart tags to a template 5.1.5 Adding parameters to the template</p> <p>5.2 Working with style sheets 5.2.1 Creating new style sheet 5.2.2 Designing navigation, the pure CSS way 5.2.3 Overview of CSS and features 5.2.4 Use of CSS to redesign text features 5.2.5 Use of CSS to move and position web graphics</p>	5
6	<p>Users and Permissions</p> <p>6.1 Understanding users and their roles 6.1.1 Creating a new user 6.1.2 Assigning a user to a group</p> <p>6.2 Content Permission 6.2.1 Adding page permission</p> <p>6.3 Designer permissions 6.3.1 Creating test area for the designer 6.3.2 Viewing the admin log, archiving changes and restoring them</p>	5
7	<p>Moodle</p> <p>7.1 What is moodle ? 7.2 Principles of moodle. 7.3 Moodle in education and training 7.4 5 myths about teaching with moodle. 7.5 Teaching Do's and Dont's</p>	3
8	<p>Understanding Content Management</p> <p>8.1 Defining Content Management 8.2 CM Is Distributing Business Value 8.3 CM Is a Balance of Organizational Forces 8.4 CM Is the Combination of Content-Related Disciplines 8.5 CM Is Collection, Management, and Publishing 8.6 CM is a Computer Infrastructure 8.6.1 The static Web site 8.6.2 The dynamic Web site 8.6.3 The Web CMS</p>	7

	8.6.4 The full CMS 8.6.5 The enterprise CMS	
9	Introducing the Major Parts of a CMS 9.1 A CMS Overview 9.2 The Collection System 9.2.1 Authoring 9.2.2 Acquiring 9.2.3 Converting 9.2.4 Aggregating 9.2.5 Collection services 9.3 The Management System 9.3.1 The repository 9.3.2 The administration system 9.3.3 The workflow system 9.3.4 Connections 9.4 The Publishing System 9.4.1 Publishing templates 9.4.2 Publishing services 9.4.3 Connections 9.4.5 Web publications 9.4.6 Other Publications	8
10	Knowing When You Need a CMS 10.1 Gauging the Amount of Content 10.2 Managing the Size of the Contribution Base 10.3 Anticipating the Amount of Change 10.4 Knowing the Number of Publications	4
	Total	48

References:

1. Content Management Bible, 2nd Edition- By Bob Boiko
2. CMS made simple 1.6- By Sofia Hauschildt
3. www.moodle.org

MCA (Comm.) Semester-V
502 : Distributed Database System

Objectives :-

1. To learn concept of advanced transaction processing, design of Database Fragmentation.
2. To learn how to manage distributed transaction process.
3. To learn distributed concurrency control and administration of distributed database.

Chapter No	Name of topics	No. of lectures
1	Advanced Application Development Performance Tuning, Performance Benchmarks, Standardization, Application Migration	4
2	Advanced Data Types and New Applications Motivation, Time in Databases, Spatial and Geographic Data, Mobility and Personal Databases.	4
3	Advanced Transaction Processing Transaction Processing Monitors, Transaction Workflows, E-Commerce, Main-Memory Databases, Real-Time Transaction Systems, Long Duration Transactions, Transaction Management in Multidatabases	6
4	Distributed Database Design A framework for Distributed Database Design, The Design of Database Fragmentation, The Allocation of Fragments	3
5	Translation of Global Queries to Fragment Queries Equivalence Transformations for Queries, Transforming Global into Fragment Queries, Distributed Grouping and Aggregate Function Evaluation, Parametric Queries.	6
6	Optimization of Access Strategies A framework for Query Optimization, Join Queries, General Queries.	5
7	The Management of Distributed Transaction A framework for Distributed Transaction, Supporting Atomicity of Distributed Transactions, Concurrency Control for Distributed Transactions, Architectural Aspects of Distributed Transactions.	10
8	Concurrency Control Foundations of Distributed Concurrency Control,	6

	Distributed Deadlocks,Concurrency Control Based on Deadlocks, Optimistic Methods for Distibuted Concurrency control	
9	Distributed Database Administration Catalog management in Disrtibuted Databases	4
	Total	48

References:

1. Database System Concepts – 5th Edition – Abraham Silberschatz, Henry Korth, S, Sudarshan(McGraw Hill International)
2. Distributed Databases Principles & systems – Stefano Ceri , Giuseppe Pelagatti.

MCA(Comm)Sem-V
503 : E-Com Practices and Technologies

Objectives :-

- 4 To really understand ecommerce students should understand the relationships among ecommerce business concerns and internet technology.
- 5 Hence in each chapter we try to present material that explores the business and technology related to ecommerce.
- 6 Ecommerce is driven by internet technology and hence we have provided specific chapter on internet technology and security.

Chapter No.	Name Of Topic	No. of Lectures
1	Introduction to Electronic Commerce and M Commerce 1.1 What is E-Commerce (Introduction and Definition) 1.2 Need to study E-commerce 1.3 Eight unique features of E-commerce 1.4 Difference between E-commerce and E-buisness 1.5 Major types of E-com (B2c,B2B,C2C,P2P,M-Commerce) 1.6 Origins and growth of E-commerce	5
2	E-com Buisness models 5.3 Eight key elements of a business model 4. B2C business model 2.3 B2B business model 6.4 Buisness models in emerging e-com areas 6.5 C2C business models and P2P models 6.6 M-commerce business models	5
3	Building an E-commerce website-Systematic approach 3.1 Prices of site building 3.2 Planning 3.3 System analysis and Design 3.4 Testing 3.5 Choosing server S/W 3.6 Hosting of website-systematic 3.6 Web Server S/W,E-com S/w ,Merchant-server S/W	5
4	Hardware for E-com site 1.6 Choosing H/w for an E-com site 1.7 Website Design 1.8 Tools for website optimization 1.9 Tools for interactivity and active content	4
5	E-com Security 2.4 E-commerce security environment 2.5 Security threats in E-com environment 2.6 Malicious code and unwanted programs 2.7 Phishing and identity theft	6

	2.8 Hacking and cybervandalism 2.9 Credit card fraud/Theft 2.10 Spoofing 2.11 Denial of service(DOS) 2.12 Distributed denial of service(dDOS)	
6	Technology Solution 2.4 Protecting Internet Communications 2.5 Encryption 2.6 Symmetric Key Encryption 2.7 Public key Encryption 2.8 Public Key Encryption using digital signatures 2.9 Digital Envelopes 2.10 Digital Certificates 2.11 Limitations to Encryption solutions.	5
7	Electronic payment System 7.1 Online credit card transactions 7.2 Digital Wallets and Digital Cash 7.3 Online stored value system 7.4 Digital accumulating balance payment systems 7.5 Digital checking payment systems 7.6 Wireless payment systems 7.7 Electronic billing-EBPP, Market size and growth	6
8	Personalization in Electronic Commerce 8.1 Need of Personalization 8.2 Personalization approaches.	4
9	Auctions and portals in E-commerce 9.1 Online auctions 9.2 Types and examples of auctions 9.3 When to use auction 9.4 Seller and consumer behavior at auction 9.5 E-commerce portals 9.6 The growth and evolution of portals 9.7 Types of portals.	5
10	E- Com Case Studies 3 Paypal has company 4 P2P network rock, music industry rolls	3
Total		48

References :

1. E-Commerce- Kenneth C.Laudon and Carol Guercio Traver
2. E-Commerce by --Kamlesh K Bajaj and Debjani Nag
3. Internet marketing and E-commerce-Ward Hanson and Kirthi Kalyanam

MCA (Comm.) Semester-V
504 : Data Warehousing and Data Mining

Objectives :-

1. To learn Information integration from Multiple System & sources
2. To learn data Normalization&Dimensional of Data.
3. Establish the foundation for Decision Support.
4. To learn algorithm, Techniques for extract Hidden Predictive information from large Database.

Chapter No.	Name of topics	No. of lectures
1	Introduction to Data Warehouse : Data Warehouse, Need for data warehouse, Multidimensional Data Model, Data Warehouse Architecture, Implementation Types Data ware house (Real time /Non real time and its application or usages),Type of dimensions (Especially Slowly changing dimension and its implementation)	4
2	Introduction to Business Intelligence (BI) What is BI? Why do we need BI? Purpose of BI. Data Warehouse for Decision Support, BI Concepts (from Data to Intelligence), BI Offerings – {Reporting, Self Service Query & Analysis, Dashboards, Data Exploration}, Free and Commercial BI Products available in Market	2
3	Data Mart : Data Warehouse and Technology, Data Marting, When is Data Mart Appropriate, Cost of Data Marting, Testing data Warehouse	4
4	Hardware and Operation Design: Hardware architecture, Physical layout, security, Backup and Recovery, Service Level Agreement, Operating the Data warehouse	4
5	Introduction to OLAP : What is OLAP? Difference between OLTP & OLAP. Difference between OLTP,OLAP and DWH	1
6	Introduction to Data Mining : Fundamentals of data mining, Data Mining functionalities, Classification of Data Mining systems, Major issues in Data Mining, Data Mining Vs KDD, Data Warehousing to Data Mining	4

7	Data Preprocessing, Languages, Architectures, KDD : Data Preprocessing: Needs Preprocessing the Data, Data Cleaning, Data Integration and Transformation, Data Reduction, Discretisation and Concept Hierarchy Generation, Online Data Storage, Data Mining Primitives, Languages	4
8	Association Rules : Association Rule Mining, Single-Dimensional Boolean Association Rules from Transactional Databases, Multi-Level Association Rules from Transaction Databases	4
9	Classification & Clustering : Classification and Prediction, Issues, Decision Tree Induction, Bayesian Classification, Association Rule Based, Other Classification Methods, Prediction, Classifier Accuracy, Cluster Analysis, Types of data, Categorization of methods, Partitioning methods, Outlier Analysis. Sequence clustering	6
10	Reporting using Pentaho Report Designer (PRD): Understand all the below features provided by Pentaho at a very basic level with sufficient hands-on activities (ideally using a relational client/server database) <ul style="list-style-type: none"> • Installing Pentaho (One Server, Multiple PRD) • Reporting Basics • Types of Data-Sources • Designing a Report • Charting using JFreeChart • Aggregations and Calculated Fields • Expressions • Formulas • Subreports • Table-of-Contents and Index • Parameters 	8
11	Web Mining , Spatial Mining, Temporal Mining	7
	Total	48

Imp :Pentaho –can be used for ETL as well as for reporting. It can be downloaded from following link.
Separate downloadable are available at the site.

Reporting :Pentaho BI 4 GA

ETL :Pentaho Data Integration 4.2 GA

<http://www.pentaho.com/download/>

Pentaho Wiki - <http://wiki.pentaho.com/display/Reporting/Pentaho+Reporting+Community+Documentation>

References:

1. Data Mining – Concepts and Techniques - JIAWEI HAN & MICHELINE KAMBER Harcourt India.
2. Data Mining Techniques – ARUN K PUJARI, University Press
3. Data Mining: Introductory and Advanced Topics- Margaret H.Dunham, S.Sridhar
4. Data Warehousing in the real world,- Sam Anahory, Dennis Murry, Pearson Education.
5. Building the Data Warehouse- William Inmon
6. Data Warehousing Fundamentals- PaulrajPonniah, Wiley-Interscience Publication.
7. Data Mining – Pieter Adriaans, DolfZantinge
8. The Data WareHouse Toolkit – Ralph Kimball

MCA (Comm.) Semester-V
505 : Multimedia and Business Administration

Objectives :-

1. To learn concept of multimedia document, synchronization and virtual reality.
2. To learn how to manage employee benefit and services, to know purpose orientation process and training and development process.

Chapter No.	Name of Topic	No. of Lectures
1	Image 2.1 Introduction: /Bit/pixel 2.2 Image types/Format of images 1.1 Color Models 1.2 Basic steps for Image Processing 1.3 Interface standards 1.4 Specifications of Digital Images 1.5 Color Management System(CMS) 1.6 Image Processing software	5
2	Multimedia Documents 2.1 Document and document Architecture 2.2 Designing a Multimedia Interchange format 2.3 Standard Generalized Markup Language(SGML) 2.4 Multimedia and Hypermedia Information coding Expert Group(MHEG) 2.5 Hypermedia Time based structuring Language(HyTime) 2.6 Open Media Framework(OMF)	4
3	User Interfaces 3.1 General design issues 3.1.1 Architectural Issues 3.1.2 Information Characteristics for Presentation 3.1.3 Presentation function 3.1.4 Presentation design knowledge 3.2 Video at user interface 3.2.1 Hardware for Visualization of Motion Pictures 3.2.2 Example : Remote camera control application	5
4	Synchronization 4.1 Notion of Synchronization 4.1.1 Multimedia Systems 4.1.2 Basic Synchronization Issues 4.1.3 Intra- and Inter-object Synchronization 4.2 Presentation Requirements 4.2.1 Pointer Synchronization requirements	6

	<p>4.2.2 Elementary media Synchronization</p> <p>4.3 The Synchronization Reference Model</p> <p>4.4 Case Studies</p> <p>4.4.1 Synchronization in MHEG</p> <p>4.4.2 HyTime</p> <p>4.4.3 Firefly System</p> <p>4.4.4 MODE</p>	
5	<p>Virtual Reality</p> <p>5.1 Forms of virtual Reality</p> <p>5.2 VR Applications</p> <p>5.2.1 Preambulation</p> <p>5.2.2 Synthetic Experience</p> <p>5.2.3 Realization</p> <p>5.3 Software Requirements</p> <p>5.3.1 Device Drivers</p> <p>5.3.2 Development Tools</p> <p>5.3.3 Navigation Engine</p> <p>5.4 Peripheral Devices</p> <p>5.4.1 Audio/Visual devices</p> <p>5.4.2 Tracking devices</p> <p>5.4.3 Navigation Devices</p> <p>5.5 Virtual Reality modeling language(VRML)</p>	5
6	<p>Managing Employee Benefits and Services</p> <p>6.1 Nature of Benefits and Services</p> <p>6.2 Why Benefits and Services</p> <p>6.3 Types of Employee Benefits and Services</p> <p>6.4 Significant Benefits and Service Programs</p> <p>6.5 Administration of Benefits and Services</p> <p>6.6 Guidelines to make Programs More Effective</p>	5
7	<p>Incentives and Performance-based Payments</p> <p>7.1 Nature of Incentives Payments</p> <p>7.2 Prerequisites for an Effective Incentive System</p> <p>7.3 Scope of Incentive Schemes</p> <p>7.4 Types of Incentive Schemes</p> <p>7.5 Group of incentive Plans</p> <p>7.6 Incentives for Indirect Workers</p> <p>7.7 Incentive Schemes in Indian Industries</p>	5
8	<p>Inducting & Placing New hires</p> <p>8.1 Induction</p> <p>8.2 Purpose of Orientation</p> <p>8.3 The Orientation Programme</p> <p>8.4 Requisites of an effective Programme</p> <p>8.5 Problems of orientation</p> <p>8.6 Placement and placement problems</p>	4

9	Training, development and carrier management 9.1 Introduction 9.2 Inputs in Training and development 9.3 Training and developments as source of competitive advantage 9.4 The Five Step Training and Development Process 9.4.1 Need Assessment – issues, benefits and consequences of absence of training need assessment 9.4.2 Deriving Instructional objectives 9.4.3 Designing Training and development programme 9.4.4 Implementation of the training programme 9.4.5 Evaluation of the programme – need, principles, techniques and levels of evaluation 9.5 Training, learning and Motivation 9.6 Training Methods 9.6.1 On the-Job Training 9.6.2 Apprenticeship Training 9.6.2 Job instruction training 9.6.3 Computer based Training 9.6.4 Distance and Internet based Training 9.7 Impediments of effective training 9.8 Carrier development 9.9 Carrier development initiatives	9
Total		48

References:

1. Principles of Multimedia by Ranjan Parekh
2. Multimedia : Computing, Communications and Applications – Rolf Steinmetz and Klara Nahrstedt
3. Human Resource Management – K. Aswathappa
4. Human Resource Management – Gary Dessler and Biju Varkkey

MCA (Commerce) SEM-V

506 : Operations Research

Objectives :-

1. To learn structure of LP model, graphical solution of a LPP.
2. To study examples on simplex, dual simplex method and transportation problem.
3. To learn game theory and Project Scheduling by PERT-CPM.

Chapter. No.	Name of Topic	No. Of Lectures
1	Chapter 1 : 1.1 The Nature of OR 1.2 The history of OR 1.3 Definitions of OR 1.4 methods for solving OR Models 1.5 Applications of OR 1.6 Features of OR	3
2	Chapter 2 : 2.1 Linear Programming 2.1.1 Structure of an LP Model 2.1.2 Applications Area of LPP 2.2 Formulation of a LP Model 2.2.1 General Mathematical Model of LPP 2.2.2 Guidelines on LPP Formulations 2.2.3 Examples of LPP Formulations 2.3 Graphical Solution of a LPP 2.3.1 Graphical Solution Methods of LP Problems 2.3.2 Special Cases in Linear Programming 2.4 Simplex Method 2.4.1 Standard form of an LP Problem 2.4.2 Simplex Algorithm(Maximization case) 2.4.3 Simplex Algorithm(Minimization case) 2.4.3.1 The Big-M Method(Use Of Artificial variables) 2.4.4 Types of Linear Programming Solutions 2.4.4.1 Alternative(Multiple) Optimal Solutions 2.4.4.2 Unbounded Solutions	10
3	Chapter 3 : 3.1 Duality theory and applications 3.1.1 Introductions 3.1.2 Formulation of Dual LPP	10

	<p>3.1.3 Standard Results on Duality</p> <p>3.1.4 Advantage of Dual</p> <p>3.2 Dual Simplex Method</p> <p>3.2.1 Examples Of Dual Simplex Method</p> <p>3.3 Sensitivity analysis in LP</p> <p>3.3.1 Sensitivity analysis</p> <p>3.3.2 Conceptual Questions</p>	
4	<p>Chapter 4 :</p> <p>4.1 Transportation Problem</p> <p>4.1.1 Mathematical Model of TP</p> <p>4.1.2 Method for finding Initial Solutions</p> <p>4.1.2.1 North-west Corner Method</p> <p>4.1.2.2 Least Cost Method</p> <p>4.1.2.3 Vogel's Approximation Method</p> <p>4.1.3 Test of Optimality</p> <p>4.1.3.1 Steps of Modi Method</p> <p>4.1.4 Variations of the TP</p> <p>4.1.4.1 Unbalanced Supply and Demand</p> <p>4.1.4.2 Degeneracy and it's Resolution</p> <p>4.2 Assignment Problem</p> <p>4.2.1 Mathematical Models Of AP</p> <p>4.2.1.1 Hungarian Method for Solving AP</p> <p>4.2.1 Solution Methods Of AP</p> <p>4.2.3 Variations Of AP</p> <p>4.2.3.1 Multiple Optimal Solutions</p> <p>4.2.3.2 Maximization case in AP</p> <p>4.2.3.3 Unbalanced AP</p> <p>4.2.3.4 Restrictions On AP</p>	10
5	<p>Chapter 5 :</p> <p>Introduction to Game Theory</p> <p>5.1 Two-Person Zero-Sum Games with saddle point</p> <p>5.2 Two-Person Zero-Sum Games without Saddle</p> <p>5.3 Algebraic Method For Solving 2 * 2 Games Without Saddle Point</p> <p>5.4 Graphical Method</p>	3
6	<p>Chapter 6 :</p> <p>Multi objective Optimization and Goal Programming</p>	4

7	Chapter 7 : Project Scheduling by PERT-CPM 7.1 Introduction 7.2 Basic Difference Between PERT & CPM 7.2.1 Significant Of using PERT/CPM 7.3 Phases Of Project Management 7.4 PERT/CPM Network Components & Precedence Relationships 7.4.1 Rules For AOA Network Construction 7.4.2 Errors & Dummies in Network 7.5 Critical Path Analysis 7.5.1 Forward Pass Method 7.5.2 Backward Pass Method 7.5.3 Float(Slack) Of an Activity & Event 7.5.4 Critical Path 7.6 Case Study	8
	Total	48

Reference Books:

1. Operations Research: H.A.Taha
2. Operations Research: V.K.Kapoor
3. Operations Research: J.K.Sharma

MCA (Comm.) Semester-V
507 : Topics for Practical

A	Practical Topics for Multimedia
1	<p>Introduction to Flash</p> <p>1.1 Introduction of Flash Interface</p> <p style="padding-left: 20px;">1.1.1 Create a Scene</p> <p style="padding-left: 20px;">1.1.2 Working with Layers</p> <p style="padding-left: 20px;">1.1.3 Working with timeline</p> <p>1.2 Create a Symbol- Movie Clip, Button, Graphics</p> <p>1.3 Create an Instance</p> <p>1.4 Working with bitmap images</p> <p style="padding-left: 20px;">1.4.1 Convert Bitmap Images to Vector</p> <p style="padding-left: 20px;">1.4.2 Change Image Color</p> <p style="padding-left: 20px;">1.4.3 Image gradients</p> <p>1.5 Working with Text</p> <p style="padding-left: 20px;">1.5.1 Drop shadow effect</p> <p style="padding-left: 20px;">1.5.2 Glow effect</p> <p style="padding-left: 20px;">8.5.3 Gradients to Text</p>
2	<p>Use of Properties</p> <p>2.1 Create Animation</p> <p style="padding-left: 20px;">2.1.1 Motion Tween</p> <p style="padding-left: 20px;">2.1.2 Shape Tween</p> <p>2.2 Motion Guide</p> <p>2.3 Masking</p> <p>2.4 Fade In and Fade Out Effect</p> <p>2.5 Zoom in Zoom Out with Fading Effect</p> <p>2.6 Blur Effect</p> <p>2.7 Bouncing Effect</p> <p>2.8 Ripple Effect</p> <p>2.9 Circular Ripple Effect</p> <p>2.10 Sparkling Effect</p>
3	<p>Using Action Panel</p> <p>3.1 Button Event handlers –</p> <p style="padding-left: 40px;">On(release), On(press), On(dragOver), On(dragOut), On(keyPress)</p> <p>3.2 Movie Clip Event handlers –</p> <p style="padding-left: 40px;">onClipEvent(load), onClipEvent(unload), onClipEvent(enterFrame), onClipEvent(mouseMove), onClipEvent(mouseDown), onClipEvent(mouseUp), onClipEvent(keyDown), onClipEvent(keyUp)</p> <p>3.3 Movie Clip properties</p> <p style="padding-left: 40px;">play(), stop(), gotoAnd Play(), gotoAndStop(),</p>

	<p>startDrag(), stopDrag(), nextFrame, prevFrame.</p> <p>3.4 Date Object – getMonth(), getDate(), getFullYear(), getYear(), getDay()</p> <p>3.5 Time Object - getHours(), getMinutes(), getSeconds(), getMilliseconds()</p> <p>3.6 Key Object – getCode(), getAscii(), isDown(), isToggled()</p> <p>3.7 Sound Object – attachSound(), start(), stop(), stopAllSounds(), setVolume(), getVolume(),</p> <p>3.8 Mathematical Funcion – sqrt(), round(), random(), max(), min(), abs(),</p> <p>3.9 View Hierarchy of Multiple Movies - loadMovie(), duplicateMovieClip(), removeMovieClip(), hitTest(), swapDepths()</p>
B	Practical Topics for Data Mining
4	<p>Data mining Query Tool version 6.0.0</p> <p>4.1 Importing Data</p> <p>4.2 Exporting Data</p> <p>4.3 Producing Summery,</p> <p>4.5 Query Builder</p> <p>4.6 Running Stored Procedure</p> <p>URL</p> <p>http://www.cs.weikato.ac.nz/ml/weka</p> <p>http://www.tysonsoftware.co.uk/download.aspx</p> <p>.net framework version 1.1.4322</p> <p>http://www.microsoft.com/downloads/details.aspx?familyid=262d25e3-f589-4842-8157-034d1e7cf3a3&displaylong=en</p>
C	Practical Topics for CMS
5	<p>Creating Pages and Navigation</p> <p>5.1 Creating pages</p> <p>5.2 Editing pages</p> <p>5.3 Activating search & replace function</p> <p>5.4 Understanding page hierarchy</p> <p>5.5 Controlling the navigation of the website</p>
6	<p>Design and Layout</p> <p>6.1 Working with templates</p> <p>6.2 Working with style sheets</p>

7	Users and Permissions 7.1 Understanding users and their roles 7.2 Content Permission 7.3 Designer permissions
8	Moodle
9	Tool name – Content management system (CMS) Sites for the tool - www.opencms.org www.cmsmadesimple.org
D	Practical for E Commerce www.freewebs.com www.networksolutions.com Note:- For execution of e-commerce Practical Internet connection will be required.