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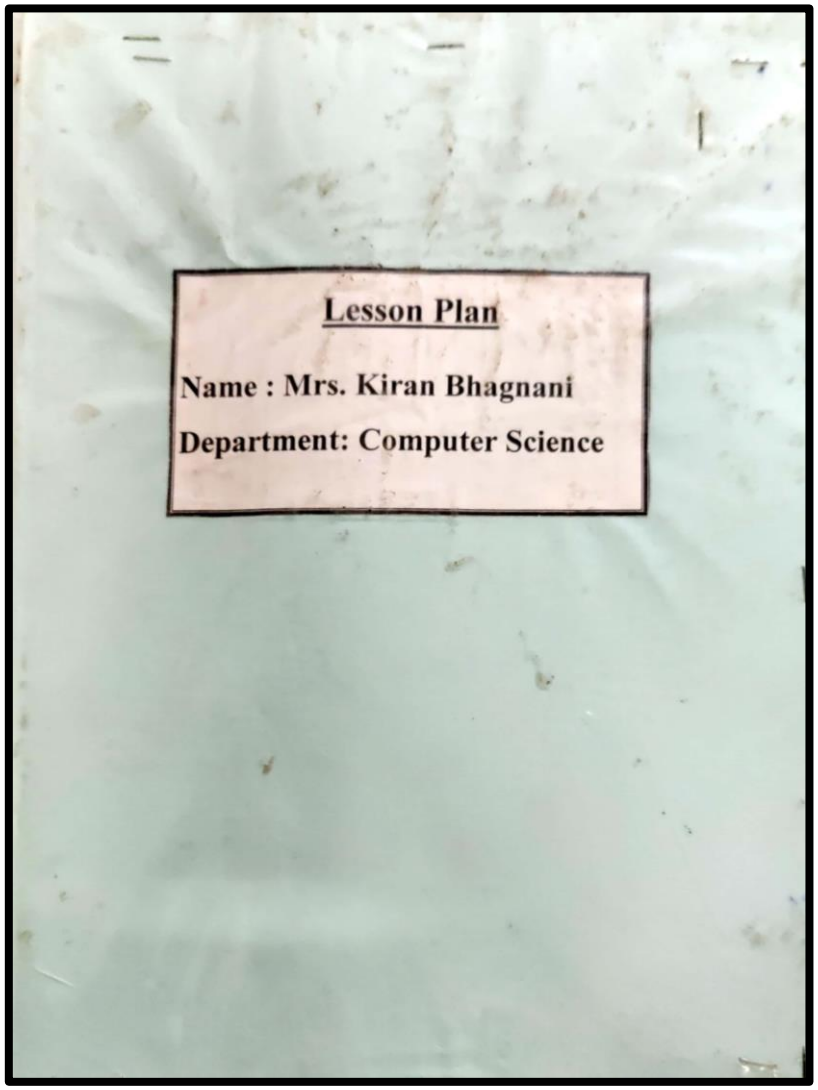

SOPHIA GIRL'S COLLEGE, AJMER (*AUTONOMOUS*)
B.C.A./ I . M.Sc. C.Sc. (SEMESTER I) 2019-20

MULTIMEDIA BASICS

Max. Marks :100 (70Ext; 30 Int) Min. Marks: 40(28 Ext;12 Int) Credit: 03

COURSE PLAN

SEM I Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
JULY	UNIT I Introduction to Multimedia Technology- Applications of Multimedia, advantages and disadvantages of Multimedia, media elements	Different formats of data representation and its requirement	PPT	Identify terminology associated with the concepts, techniques, and processes used throughout the multimedia environment.	*Knowledge Based* Define multimedia List media elements *Understanding Based* Which interface is best suitable to take input from the user and why?	Knowledge--60 Understanding-30 Higher Order-10
	User Interface and its types, importance and its features, MM hardware and software requirements	Requirements of different hardware and applications needed to deal with multimedia data	Match the following, Demonstration, PPT			
AUGUST	Images: rastor and vector images UNIT II Image compression: Lossy and Lossless Compression, advantages and disadvantages of image	Comparison of different image types and compression techniques	PPT and lecture method	Compare different image types and compression	Give comparison between vector and Bitmap Images	

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	compression, audio synthesis, speech recognition and Speech Synthesis.					
SEPTEMBER	Jpeg image compression, mpeg video compression. Developing Applications using multimedia, methodology and design, Various multimedia laws: Patent law, Trademark Law, Trade secret Law, and Copyright Law.	How to design a Multimedia application , Business and Ethical laws in society	PPT, Quiz	Study laws of multimedia and design environment	*Higher Order Thinking Skills Based* Can integration of different media elements can be accomplished in any computer? Justify	
	UNIT III Introduction to Flash: Tools of Flash (Pen, Pencil, Paint Bucket Tool, Eye Dropper, Text, 3D rotation etc),	Creating Animation using vector images	PPT, Practical	Design basic animations and gif images using flash		
OCTOBER	Drawing object in flash (line, curve, oval, Rectangle , Polystar tool) , stroke and fill, Layers and its types in flash, Key frames, symbols, Object based animation, motion tween, classic tween and shape tween, adding sound.	Importance of computers in developing animation and how to select particular tween from various options	PPT, Practical, Live Examples			

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SOPHIA GIRL'S COLLEGE, AJMER (*AUTONOMOUS*)
B.C.A II (SEMESTER III) 2019-20
BCA – 301 Data Structure & Algorithm – II

Max. Marks :75 (50Ext; 25 Int) Min. Marks: 30(20 Ext;10 Int) Credit: 03

COURSE PLAN

SEM III Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
JULY	UNIT I Introduction to stacks, Representation of stacks, Implementation of stacks using Array & Link List, Uses of stacks (evaluating, expression)	Types of data structures Linear data structure Familiarizing the stack and queue examples in our daily life The various operations that can be implemented on data structure	PPT, Practical Implementation, Practice questions, worksheet	Design linear data structure using stack Evaluate expressions using stack	*Knowledge Based* What is linear data structure? Define push and pop operation in stack *Understanding Based* What is the time complexity of tree traversal? Comparison of array and link list	Knowledge--50 Understanding-35 Higher Order-15
AUGUST	Introduction to queues, Implementation of queues (with algorithm), Circular Queues.	Comparison of stack and queue data structure	PPT, Practical Implementation	Design linear data structure using queue		

	UNIT II Trees: Definition & Basic concepts, linked tree representation	Overview of Non linear data structures	PPT, Practical Implementation, MCQ's		*Higher Order Thinking Skills Based* Write a program to perform the factorial of given number. Give the algorithm of insertion in queue	
SEPTEMBER-	Introduction to Binary Tree, Traversing Binary Trees (Pre order, Post order and Inorder), Concept of Binary search tree, algorithm of Searching, inserting and deleting in binary search trees.	Role of Traversing in tree data structure	PPT, Quiz	Understand the tree data structure and implement its traversing		
	UNIT III Graph: Introduction to graphs, types of graphs (complete,weighted,unweighted,simple),	Comparison of graph and tree data structure Different types of graph available and its use.				
OCTOBER	Representation of Graph: adjacency Matrix, incidence Matrix, Graph Traversal: Breadth first search, Depth first search. Recursion: Factorial, Fibonacci, Tower of Hanoi.	How graphs can be implemented in different ways and comparison of their complexities. Concept of Fibonacci series and tower of Hanoi	PPT, Practical, Live Examples	Analyze graph representations and applying recursion to problems		

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SOPHIA GIRL'S COLLEGE, AJMER (*AUTONOMOUS*)
B.C.A III (SEMESTER V) 2019-20
BCA – 505 Advance Database Management System

Max. Marks :75 (50Ext; 25 Int) Min. Marks: 30(20 Ext;10 Int) Credit: 03

COURSE PLAN

SEM V Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
JULY	**UNIT I** Query optimization & processing: algorithm for external sorting, select & join operation, project & set operations. Temporal and multimedia databases.	Optimization in day to day life and how it is applied to various operations in DBMS How keeping time attribute is important in databases	PPT, Practice problems	Compare and Contrast between different types of databases. Optimize the operations	*Knowledge Based* What is query? Define interoperation in databases. BLOB and CLOB data types.	Knowledge--40 Understanding-40 Higher Order-20
AUGUST	Parallel Databases : I/O Parallelism, Interquery Parallelism, Intraquery Parallelism.	Importance of executing operations in parallel	PPT, Quiz	Implement basic operations of database language	*Understanding Based* Explain the two phase commit protocol of databases. Give a brief	
	UNIT II Distributed Databases: Distributed Data Storage, Distributed Transactions, Commit protocol, Concurrency Control in Distributed Databases	How data can be processed from various sites in distributed databases. Problems that do exist in distributed architecture				

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					explanation of temporal databases *Higher Order Thinking Skills Based* Compare between parallel and distributed databases. Write a PL/SQl code for trigger creation	
SEPTEMBER-	Introduction to PL/SQL and its advantages over SQL, PL/SQL block structure, variables and constants, attributes, character set, data types, control structures, conditional control.	Importance of PL/SQL and data types available in PL/SQL in respect to SQL	PPT, Practical Implementation	Handle the events occurring on database		
OCTOBER	**UNIT III** Sequential control, Error handling in PL/SQL, creating function & procedure, package functions, package procedures, Oracle transactions	Different ways of handling error in PL/SQL.	PPT, Practical Implementation	Handle the events occurring on database and explicit error handling		
	Database Triggers: Introduction, Use & type of database Triggers, Triggers Vs. Declarative Integrity Constraints, BEFORE Vs. AFTER Trigger Combinations, Creating a Trigger, Dropping a Trigger.	Importance and various combinations of triggers in databases.				

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SOPHIA GIRL'S COLLEGE, AJMER (AUTONOMOUS)
V.C.A III (SEMESTER V) 2019-20
VCA – 502 Website Development

Max. Marks :75 (50Ext; 25 Int) Min. Marks: 30(20 Ext;10 Int) Credit: 03

COURSE PLAN

SEM V Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
JULY	UNIT I Introduction of HTML: introduction, markup language, editing common tags, headers, text styles, working with Links: creating a hyperlink, selecting hyperlink color, linking different sections of the webpage, formatting text, horizontal rules and more line breaks, unordered lists, nested and ordered lists. Working with images: inserting an image, adding border to image, aligning an image, using image as hyperlink. Working with tables: creating table, specifying caption to a table, setting width of table and table columns, setting cell spacing and padding ,spanning rows and columns, image maps.	Basic Formatting of WebPages Properties of Images and Table	PPT, Programs	Get familiar with basics of the Internet Contrast between static and dynamic WebPages	*Knowledge Based* What is static webpage? Give the use of align attribute of tags. What is hyperlink? *Understanding Based* What is nested list? Explain by an example. Write an HTML code to divide the webpage into four vertical sections.	Knowledge—40 Understanding-40 Higher Order-20
AUGUST	Unit II Basic HTML forms, working with	Understanding different sections	PPT, Programs	Acquire knowledge and skills for creation of web		

	frames: creating vertical and horizontal frames, applying hyperlink targets to a frame. **Cascading style sheets**: inline, internal and external style sheets. **Java script** – introduction to scripting, JavaScript Keywords, variables, expression, data type, var.	of Webpage and how CSS can save time and effort in website development		site considering HTML and client side programming using JavaScript	*Higher Order Thinking Skills Based* Write a code to create a function to take input from user and find its factorial. Write a code to show use of different math methods.	
SEPTEMBER-	Unit III Operators : Arithmetic Operators, Relational Operators, Logical Operators, Assignment Operators, Increment/ Decrement Operator, Conditional operator, Comma operator, % (Modulus), ++ (Increment), -- (Decrement), - (Unary Negation). Control Structure: if-else, switch, Break, loop: while, do-while, for, for-in.	How JavaScript can be incorporated in HTML document. How to take and process input form then user	PPT, Practical Implementation	Design website using both the scripting languages		
OCTOBER	Function: create, Core JavaScript (Properties and Methods of String, Math and Date Object) Java script arrays: introduction, array-declaring and allocating arrays.	Use of functions and various objects variable in JavaScript Comparison of code without array and with arrays.	PPT, Practical Implementation	Implement the functions of Date, Math and String objects		

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SOPHIA GIRL'S COLLEGE, AJMER (AUTONOMOUS)

M.SC Computer Science (FINAL) 2019-20

SEMESTER III (M.Sc. C. Sc. Final)

MSC – 304 Advance Database Management System

MAX MARKS: 100(70EXT; 30 INT) MIN. MARKS: 40(28 EXT;12 INT) Credit: 03

COURSE PLAN

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM III JULY	UNIT I **Object Oriented concepts:** complex objects, object definition language, object query language	Concept of Objects and types of databases with reference to their relevance.	PPT, Lecture , Diagrams	Understand OODBMS concepts	*Knowledge Based* Define time interval What is optimization?	Knowledge--25
	Distributed Databases: Distributed Data Storage, Distributed Transactions, Commit protocol, Concurrency Control in Distributed Databases.	Problems that do exist in distributed architecture		Compare between different database types	*Understanding Based*	Understanding-45
	Transaction management, and serializability, Recovery technique: log based recovery, Temporal database concept and multimedia database.	How keeping time attribute is important in databases.		Understand the utility of different databases and complexity	What is the need of external sorting? Explain sort merge algorithm Explain how data constraints are necessary in databases.	Higher Order-30
AUGUST	**Query optimization and processing**, algorithm for external sorting, select and join. Project and set operations	Optimization in day to day life and how it is applied to various operations in DBMS	Hands on Exercise		*Higher Order Thinking Skills*	

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	UNIT II **Introduction to SQL**, E.F.Codd's rules, Components of SQL, Data Types, DDL & DML Commands (create, alter, insert, delete and update) & Constraints: Primary Key, Foreign Key, Check Constraints, Unique & Not Null. **SQL**: Searching, Matching & Basic Oracle Functions: String, numeric, Aggregate & Conversion Functions,	Concept of Databases languages and its components, security aspects, Basic of SQL language,	Hands on Exercise and Practical Implementation	Execute various operations on database using SQL	*Based* Write a PL/SQl code for trigger creation. Write a Pl/sql code to insert records in database	
	Queries based on group by clause, Sub queries & joins.	Different types of queries on databases	Hands on Exercise and Practical Implementation	Execute various queries on database using SQL		
SEPTEMBER	Unit III **Introduction to PL/SQL** and its advantages over SQL, PL/SQL block structure , PL/SQL syntax, Data types, Control structures, conditional checking, Error handling in PL/SQL	Importance of PL/SQL and data types available in PL/SQL in respect to SQL	Hands on Exercise and Practical Implementation	Handle error and various events on database		
OCTOBER	Oracle transactions, creation and execution of procedures, creating function and packages.	Utility of packages and comparative analysis of functions and procedures	Practical Implementation	Compose packages in PL/SQL		

	Database Triggers: Introduction, Use & type of database Triggers, Triggers Vs. Declarative Integrity Constraints, BEFORE Vs. AFTER Trigger Combinations, Creating a Trigger, Dropping a Trigger.	Importance and various combinations of triggers in databases.	Practical Implementation	Able to handle database events occurring on system		

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SOPHIA GIRL'S COLLEGE, AJMER (*AUTONOMOUS*)

B.C.A II (SEMESTER IV) 2019-20

BCA – 401 Discrete Mathematics

Max. Marks :75 (50Ext; 25 Int) Min. Marks: 30(20 Ext;10 Int) Credit: 03

COURSE PLAN

SEM IV Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
JANURARY	**Unit I** **Sets:** Elements of a set, methods of describing a set, types of sets, Operations on sets-- union, intersection and difference of sets, Associative Laws, Distributive laws, DeMorgan's laws, Venn Diagrams, ordered pairs, Cartesian product of two sets.	Membership of set and how to examine their relationships	PPT, Practical Implementation, Hands- on Exercise	Apply set operations to solve applied problems	*Knowledge Based* What is set? Define reflexive relation. *Understanding Based* Prove DeMorgans law of set theory. Give the utility of quantifiers. *Higher Order*	Knowledge-- 50 Understanding- 35 Higher Order- 15
FEBURARY	**Unit II** **Relation:** Basic definition of relation and types of relations (reflexive, irreflexive, symmetric, A-symmetric, transitive, anti symmetric, equivalence), Binary relations, domain, range, inverse and composite.	Need of Relation and how to write the elements in relation from given equation	PPT, Practical Implementation, Hands- on Exercise	Able to recognize the membership of relationship set		
	Algebra of logic: Propositions and Logic operations, truth tables, arguments and validity of arguments, propositions generated	Understand the need to represent knowledge in systems and how to	PPT, Practical Implementation, Hands- on Exercise	Examine the validity of argument by using		

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	by a set, equivalence and implication laws of logic	store it		Propositional Calculus	*Thinking Skills Based* Is Adjacency matrix of all graphs symmetric? Justify by example In a class, 60% students like math whereas 50% like science. What per cent of students like both math and science?	
MARCH	**Unit III** Logical Connectives – Disjunction, Conjunction, Negation, Conditional Connectives, Quantifiers.					
	Graph Theory: Definition, Basic terminology, Types of graph (Simple, Multi, Pseudo, Finite & Infinite, Null, Complete, Cyclic & Acyclic, Weighted & Unweighted graph)	Understanding graph components and importance	PPT, Practical Implementation, Hands- on Exercise	Understand different graphs and matrix operations.		
	Matrix operations: addition, subtraction, multiplication Matrix representation of graph: Adjacency matrix, Incidence Matrix	Representing data in two dimensions				

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SOPHIA GIRL'S COLLEGE, AJMER (*AUTONOMOUS*)
B.C.A III (SEMESTER VI) 2019-20
BCA – 601 Software Engineering

Max. Marks :75 (50Ext; 25 Int) Min. Marks: 30(20 Ext;10 Int) Credit: 03

COURSE PLAN

SEM IV Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
JANURARY	**Unit – I** **Software Engineering** : Introduction, definition , Software Characteristics, Applications	Engineering tools , need to follow protocols while designing software	PPT	Understand basic concepts of software engineering. Compare different software engineering process models	*Knowledge Based* Define Error in testing. What is software audit? *Understanding Based*	Knowledge--40 Understanding-40 Higher Order-20
	Software Process: Introduction, Framework..Process, Project and people. SDLC, Process Models: Waterfall, Spiral, Prototyping & Incremental Model.	How to choose design method				
FEBURARY	**Unit – II** **Software Measurement:** Size metric **Design:** Introduction , Definition, Objective ,Modularity(Cohesion & Coupling)	Features of metrics, how to design reusable components and their inter relationships	PPT, Practical Implementation	Create architectural design for a given project	Discuss the differences between system and unit testing.	

	Coding: Introduction, Code Review (Code Walkthrough, Inspection, Clean room Approach)				*Higher Order Thinking Skills Based*	
MARCH	Unit – III Testing: Introduction, Objective, Characteristics, Principles, Testability Software Testing Strategies: Unit Testing, Integration Testing, Validation Testing (Alpha and Beta Testing), Verification, System Testing (Recovery, Security, Stress, Performance), Black Box Testing and White Box Testing : Introduction and Comparison.	Effective testing leads to easily acceptance for the software	PPT, QUIZ	Apply different testing techniques	Contrast between functional and non functional requirements of software. Give Importance of software testing and compare verification and validation.	

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V.C.A III (SEMESTER VI) 2019-20

VCA – 602 Multimedia Technology

Max. Marks :75 (50Ext; 25 Int) **Min. Marks: 30(20 Ext;10 Int)** **Credit: 03**

COURSE PLAN

SEM VI Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
DECEMBER	Unit – I Introduction to Multimedia , Advantages and Disadvantages of Multimedia	Effective Communication, its source and usage	PPT	Identify terminology associated with the concepts, techniques, and processes used throughout the multimedia environment	*Knowledge Based* Define multimedia Computer Write short note on video *Understanding Based* Explain how user interface is important for any multimedia interface.	Knowledge—40 Understanding-40 Higher Order-20
JANURARY	Media elements, Application areas of Multimedia, System components, user interface and its types, importance and Features of user interface, MM hardware & software requirements.	Integrating various media elements for a project.	PPT , Quiz	Understand the multimedia system		

	Unit – II Images: Raster and Vector image				Give differences between bitmap and vector images.	
FEBURARY	compression: Lossy and Lossless Compression, advantages and disadvantages of compression, jpeg image compression Various multimedia laws: Patent law, Trademark Law, Trade secret Law, Copyright Law.	Utility of Compression and various standards, privacy aspects of project	PPT	Study laws of multimedia and importance of compression technique	*Higher Order Thinking Skills Based* Write down the steps to create butterfly and apply guide layer.	
	Introduction to Flash: Uses of flash, hardware requirements of flash, Tool Box and its components (Line tool, Pen, Pencil, Paint Bucket Tool, Ink bottle tool, Eye Dropper), Color effects (solid, linear gradients & Radial gradients) Text tool.	Utility of flash file, how to render simple components on stage.	PPT, Practical Implementation	Understand key concepts of Flash designing tool	Can integration of different media elements can be accomplished in any computer? Justify	
MARCH	**Unit – III** Flash: 3D rotation, Eraser tool, concept of frames, significance of frames, key frame, Drawing object in flash (line, curve, oval, Rectangle , Polystar tool) , Layers and its types in flash. Insert and rename layers, Envelope, Object based animation	Utility of layers and comparative analysis of tweens	PPT, Practical Implementation	Design basic animation and gif images for publishing		

	(frame by frame animation, motion tween, classic tween and shape tween, animating text), adding,sound					

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M.SC Computer Science (FINAL) 2019-20

SEMESTER IV (M.Sc. C. Sc. Final)

MCS – 401 ARTIFICIAL INTELLIGENCE

MAX MARKS: 100(70EXT; 30 INT) MIN. MARKS: 40(28 EXT;12 INT) Credit: 03

COURSE PLAN

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM IV JANURARY	Unit I Definition of AI, Applications of AI	Human Intelligence vs artificial systems, various inputs and outputs	PPT, Lecture method , Live Examples	Understand basic principles and application of AI	*Knowledge Based* Define Artificial Intelligence What is logic? *Understanding Based* What is inferencing in artificial systems? Explain by an example. Give the application areas of expert systems.	Knowledge—25 Understanding-45 Higher Order-30
	Knowledge-based systems, representation of knowledge, organization and acquisition of knowledge.	Role of knowledge in building artificial systems				
FEBURARY	Syntax, semantics of propositional logic, syntax and semantics of FOPL, conversion to clausal form.	Logical reasoning and its storage	PPT, Hands on Exercise	Represent knowledge in various ways		
	Unit II Inference rule, resolution principles Non-deductive inference methods, Representation using rules,	Inference methods and the management of knowledge based systems, handling	PPT, Hands on Exercise	How to apply inference in artificial systems		

	truth maintenance system, and fuzzy logic.	non discrete values			
MARCH	Bayesian probabilistic inference, associative networks, frame networks,	Different forms of knowledge representation	PPT	Solve various problems by applying a suitable search method	*Higher Order Thinking Skills Based* Briefly give comparison between informed and uninformed search. Explain forward and backward chaining in inferencing.
	Search problems: uniformed or blind search (Recursive DFS, Iterative Broadening, Bi-Directional searching), informed or Heuristics Search(Greedy or Best First search).	Importance of search procedure and how to select the best one of the domain	PPT, Hands on Exercise		
	Concept of learning: Inductive and deductive, Knowledge acquisition, rote learning, Components of Learning Model, Performance Measures	Concept of Automated systems and how systems can learn	PPT	Understand key concept of learning	
APRIL	Types of Learning (Supervised, Unsupervised, Active & Reinforcement).	Anatomy of learning in artificial systems	PPT		
	Concept of expert system, need for an expert system, Characteristics & features of an expert system, Components of an expert system, Stages in the development of an expert system, Application areas of Expert System.	Rule Based systems , its creation and usage	PPT	Plan an expert system for specific domain	

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M.SC Computer Science (FINAL) 2019-20

SEMESTER IV (M.Sc. C. Sc. Final)

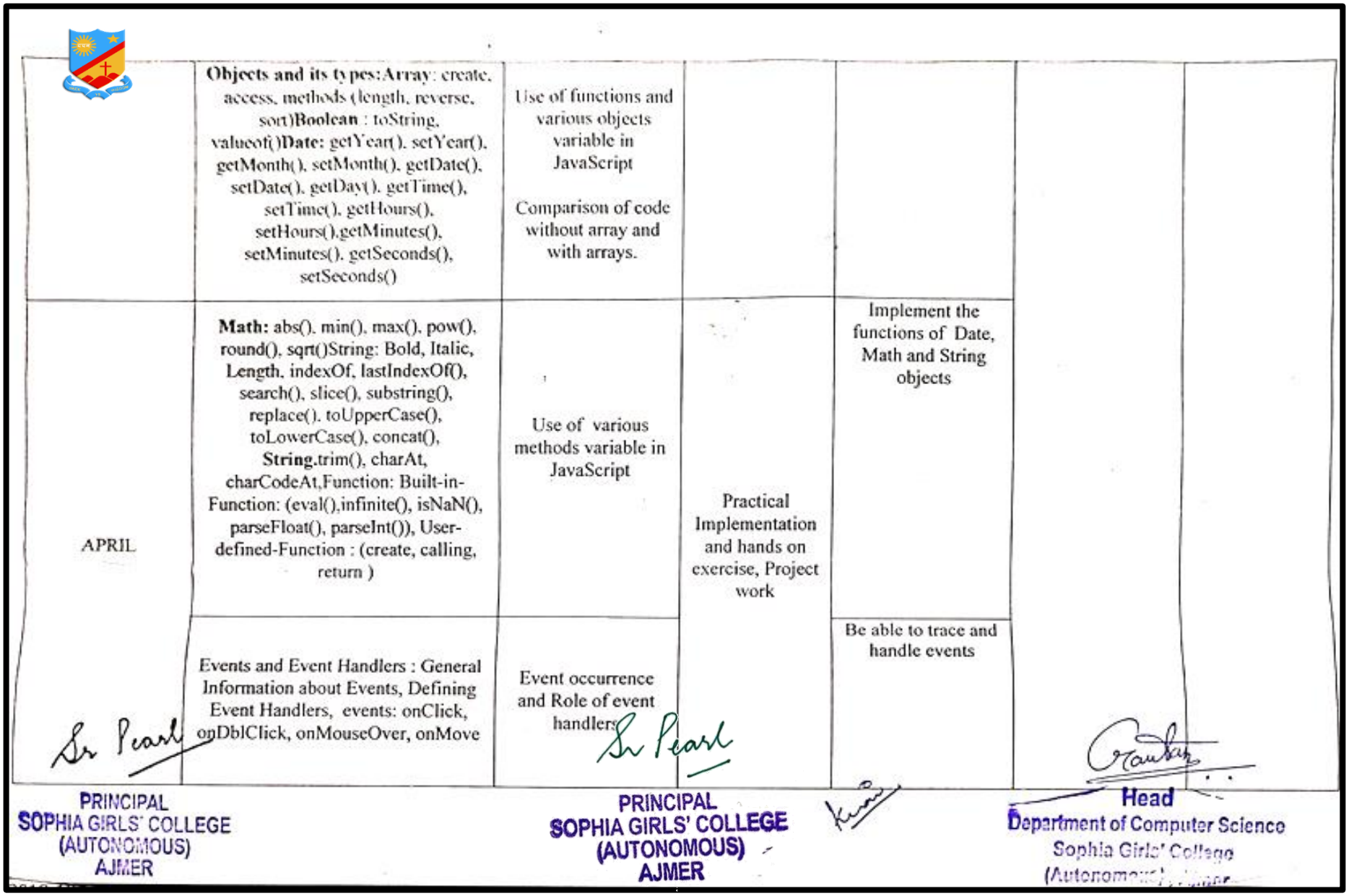
MCS – 403 WEB TECHNOLOGY

MAX MARKS: 100(70EXT; 30 INT) MIN. MARKS: 40(28 EXT;12 INT)) Credit: 03

COURSE PLAN

SEM/ Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM IV JANURARY	**Unit – I** **HTML :** Introduction, HTML Documents, Basic structure of an HTML document, Creating an HTML document , Information type elements, Character Formatting Elements, Block Formatting Elements.	Basic Formatting of WebPages Properties of Images and Table	PPT, Practical Implementation and hands on exercise	Get familiar with basics of the Internet Contrast between static and dynamic WebPages	*Knowledge Based* Define static website. Define cell padding. *Understanding Based* Write an HTML code to show the	Knowledge—25 Understanding-45 Higher Order-30
	Working with Lists, Hyperlinks, Images. **HTML Tables :** Introduction to HTML tables and their Basic Structure Part, The table tags, Attributes of Table Tag, attributes of <TR>Tag, Attributes of <TD >Tag, Attributes of <TH> Tag.	Understanding different sections of Webpage and how CSS can save time and effort in website development				

FEBURARY	**Unit – II** **Forms :** Introduction, The FORM Elements, Form Controls, Named Input fields, The <INPUT> tag, Hidden, Text box, Text Area, Password, Button, Submit, Reset, Radio, Checkbox, Select, pull down .	Utility of different form controls and data usefulness	Practical Implementation and hands on exercise	Acquire knowledge and skills for creation of web site considering HTML and client side programming using JavaScript	concept of nested list. *Higher Order Thinking Skills Based* Write a Javascript code to handle onClick event.	
	Java Script: Introduction, Keywords, variables, Data type Numbers, Booleans, Strings, Objects, Null, Undefined. **Operators :** Arithmetic Operators, Relational Operators, Logical Operators, Assignment Operators, Increment/ Decrement Operator, Bitwise Operator, Conditional operator, Comma operator, delete, new, this, Expression, Comment, Input-output.	Comparison of HTML and java Script, type caste languages, How JavaScript can be incorporated in HTML document, How to take and process input from then user				
MARCH	**Unit – III** **Control Structure**: if-else, switch, Loop: while, do-while, for, for-in, break, continue, return, import, export.	Compare for and for-in loop,use of import and export	Practical Implementation and hands on exercise	Design website using both the scripting languages		



	Objects and its types:Array: create, access, methods (length, reverse, sort)**Boolean** : toString, valueof()**Date:** getYear(), setYear(), getMonth(), setMonth(), getDate(), setDate(), getDay(), getTime(), setTime(), getHours(), setHours(),getMinutes(), setMinutes(), getSeconds(), setSeconds()	Use of functions and various objects variable in JavaScript Comparison of code without array and with arrays.			
APRIL	**Math:** abs(), min(), max(), pow(), round(), sqrt()String: Bold, Italic, Length, indexOf, lastIndexOf(), search(), slice(), substring(), replace(), toUpperCase(), toLowerCase(), concat(), **String**.trim(), charAt, charCodeAt,Function: Built-in-Function: (eval(),infinite(), isNaN(), parseFloat(), parseInt()), User-defined-Function : (create, calling, return)	Use of various methods variable in JavaScript	Practical Implementation and hands on exercise, Project work	Implement the functions of Date, Math and String objects	
	Events and Event Handlers : General Information about Events, Defining Event Handlers, events: onClick, onDblClick, onMouseOver, onMove	Event occurrence and Role of event handlers		Be able to trace and handle events	

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