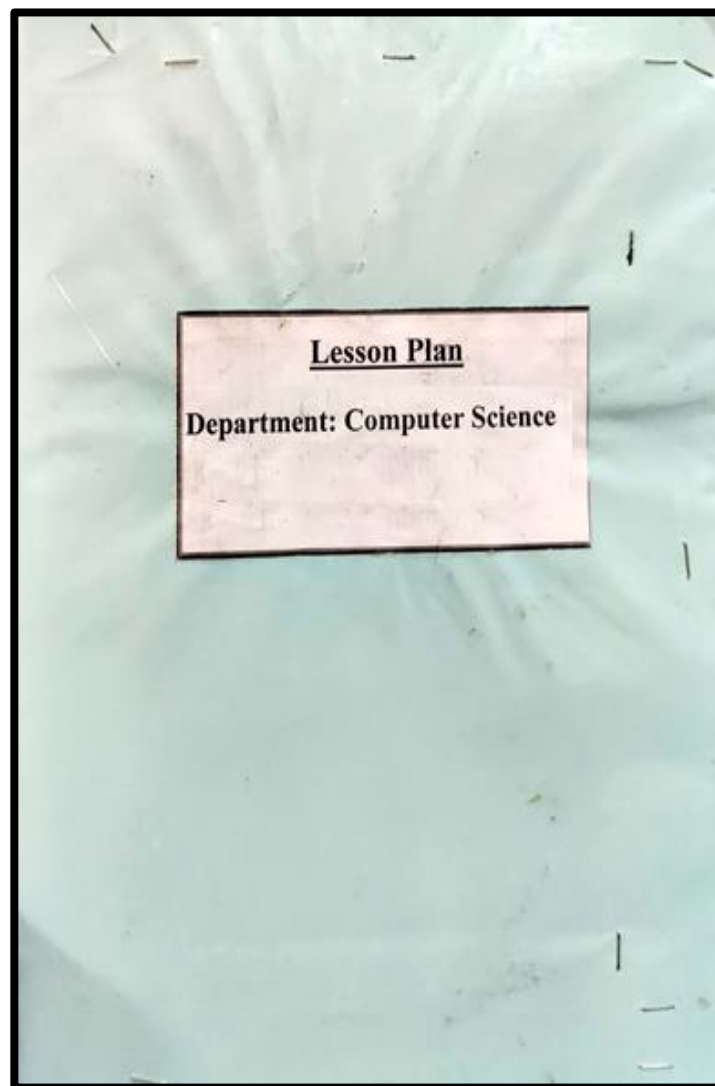




SOPHIA GIRLS' COLLEGE(AUTONOMOUS), AJMER





SOPHIA GIRL'S COLLEGE, AJMER (AUTONOMOUS)

B.C.A II (SEMESTER III)

Data Base Management System-II (BCA-404)

Min. Marks: 30(20 Ext;10 Int)

Credit: 03

Max. Marks : 75 (50Ext: 25 Int)

COURSE PLAN

SEM III Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JULY	UNIT I Overview and history of DBMS, Basic DBMS terminology, File processing v/s DBMS, advantage and disadvantage of DBMS, DBA and his responsibilities, Data abstraction, physical and logical data independence.	Concept and need of DBMS, importance of DBA in DBMS	PPT, Comparison with Charts,	Understand the concept of dbms and its application, understand importance of Layer architecture of dbms. Understanding of different data models	<u>Knowledge Based</u> -Who is DBA? - Define the term Data and Information.	Knowledge--60 Understanding-30 Higher Order-10
	Architecture of DBMS: client/server architecture, 2 tier & 3 tier.	functioning of database management systems	Layered architecture diagram.		<u>Understanding Based</u> - Illustrate the advantages and disadvantages of DBMS.	
	Overview of hierarchical, network and relational models, comparison of network, hierarchical and relational models.	Utilize a database modeling technique	Comparison Charts			
AUGUST	UNIT II Entity relationship model: Overview of DataDesign Entities, Attributes and Entity Sets, Relationship and	Apply the principles of data modeling using entity relationship	PPT, Diagrams, Models	• Design ER-models to represent simple database application scenarios,	- What is the	



	Relationship sets			Familiar with basic database storage structures and access techniques	Role of Aggregation, Abstraction in the enhanced E-R model?	
	Features of the ER Model- key Constraints, Participation Constraints, weak Entities, degree of relationship, keys	Apply Graphical Representation On Data base.	Graphically represent the relationship between database			
	Generalization, Specialization, Aggregation, Implementation of sequential, random & indexed sequential file organization	Build indexing mechanisms for efficient retrieval of information from a database.	PPT, Diagrams, Examples			
SEPTEMBER-OCTOBER	UNIT III Relational Model: Storage organization for relations, Relational Algebra: Set Operators(Union, Intersection, Set-difference, Cartesian Product)	Create and access the database using relational algebra operator		Understands the relational algebra concepts and operators which helps in understanding queries, Identifies the functional dependencies, • Improve the database design by normalization.	<u>Higher Order Thinking Skills Based</u> - Elaborate the role and responsibilities of DBA. - Explain Client-Server architecture.	
	Relational Operators: (Select, Project, Rename, join), E.F Codd's rules, Schema refinement and normal forms:	Create and access the database using relational algebra	PPT, tables, Examples			
	Introduction to schema refinement, Functional dependencies, Boyce-codd Normal forms, Third Normal form, Normalization-Decomposition into BCNF Decomposition into 3-NF.	good database design and normalization techniques to normalize a database.	PPT, Comparison chart, database tables			

Course Plan 2019-20

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B.C.A III (SEMESTER V)

E-Commerce 501

Min. Marks: 30(20 Ext;10 Int)

COURSE PLAN

Max. Marks : 75 (50Ext; 25 Int)

Credit: 03

SEM V Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JULY	UNIT-I E-Commerce -Introduction, Objectives, Advantage, Disadvantages,	Aim of E-Commerce	PPT	Understand concept of Ecommerce and its types.	<u>Knowledge Based</u> - What is the difference between Index and an associative array? - Define the term electronic cash?	Knowledge--50 Understanding-35 Higher Order-15
	Traditional commerce Vs. E- Commerce, Partial Vs Pure E- commerce.	Utility of E-Commerce.	PPT, Comparison with Charts			
	Impact of E-Commerce in different areas , The anatomy of E-commerce	Effects of E- Commerce in Society	PPT			
AUGUST	UNIT-II Framework of E-commerce, Business Models based on the relationship of Transaction Parties Business - to - Business (B2B),Business - to - Consumer (B2C),Consumer - to -	Understanding the relation between business and customer Through example of Online Business Websites like Amazon, E-Bay,	PPT Lectures, Quiz	To understand the factors needed in order to be a successful in e-	<u>Understanding Based</u> -Compare between local and global variable with example.	



	Consumer (C2C), Consumer - to - Business (C2B), Business - to - Government			commerce	- Find out the social impact of E-commerce.	
	(B2G), Government - to - Business (G2B), Government - to - Citizen (G2C), Intra-Business Organizational.	Identify the basic Government Policy in business and their importance	PPT lecture, discuss with Real world examples		<u>Higher Order Thinking Skills Based</u> - Elaborate the role of a Brokerage Site? Give an example for this model.	
	Business Models based on the relationship of Transaction types: Brokerage model, Aggregator and Advertising model.	Importance of various business model for doing transaction.			- Explain How digital signatures are used for authentication?	
SEPTEMBER-OCTOBER	UNIT-II EDI :Introduction, EDI Documents, Steps in an EDI System, Advantages of an EDI System, Application of EDI in business.	Understand the concept and importance for data exchange electronically	PPT lecture,	Be aware of the ethical, social, and security issues of information systems;		



	Electronic Payment Systems: Introduction, Features, Types (E-Cash, E-cheque, credit card, Smart Card, Electronic Purses)	Handle electronic transactions in secure way				
	E-Customer Relationship Management, Security Threats (Active, Malicious, Server side)	Demonstrate awareness of ethical, social and legal aspects of e-commerce	PPT			

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Course Plan 2019-20

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V.C.A I (SEMESTER I)

PC Software I (VCA – 102)

Min. Marks: 30(20 Ext;10 Int)

COURSE PLAN

Max. Marks : 75 (50Ext; 25 Int)

Credit: 03

SEM I Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JULY	UNIT-I Software: System software, application software, utility software. User Interface: Introduction to CUI and GUI and Comparison .	Learn the importance of software and its types	PPT, Comparison chart	Identify the features of common application of MS window.	<u>Knowledge Based</u> - Why is software needed in computer? - Differentiate between Custom software and Utility software.	Knowledge--40 Understanding-40 Higher Order-20
	MS Windows, Features of Windows, Desktop (My Computer, My Document, Recycle Bin, Network Places, Internet Explorer. Windows Explorer, Start Menu and Task bar. System * Tool:, Disk defragmentation, System Information, System Back up & Restore.	Demonstrate the features of MS Window.	PPT, Quiz		<u>Understanding Based</u> - Write in brief about the use of different view of a document available in MSWord.	

Course Plan 2019-20



	Control Panel : Add & Remove Hardware / Software, Date & Time, Personalization , Font, Mouse, Keyboard, Printer & Faxes, Sound, User Account, Windows Task Manager, Power option, Folder Option.	Identify the tools of Control Panel	PPT			- Why we use watermark in MS-Word? How do you create a watermark in Word?
AUGUST	UNIT-II MS-Word: Introduction to MS-Word, Features, Application Areas and its uses, types of views, Creating & Saving : New Document, copy, cut, paste, paste special, clipboard, undo, redo, Fonts,	Understanding the basic features and importance of MS-Word	Implement the various tools and features of MS Word	identify and work with basic Word tools and features		
	Paragraphs: Indentation and Spacing, Columns & Breaks, Styles, Find, Replace & Goto. Inserting Tables, Picture, ClipArt, Shapes, Smart Art and Charts, Symbols and Equations, Hyperlink, Bookmark. Header & Footer. DropCap, Textbox, WordArt, Date and Time.	Able to use paragraph formatting, also able to create interactive graphical documents.		Edit text and modify the appearance of text in a Word document insert special characters and graphical objects organize data in tables		<u>Higher Order Thinking Skills Based</u> - What are drives and folders? How does MS Window organize files and folders on drives? - List the features of MS Word.
	Table of contents, Footnotes and Endnotes, Page background. Mail merge,	Able to create tables and mailing technique .				


Course Plan 2019-20



	Macros, Auto correct and Auto Text. Comments, Page Setup, Size, Margins, Gutter, Orientation.					
SEPTEMBER- OCTOBER	UNIT-III MS-PowerPoint: Introduction to PowerPoint, Features, Application Areas and its uses, Creating Presentations through Blank Presentations,	Identify the importance of PPT features.	Implement the slide presentation, and graphics animations	customize the PowerPoint environment and a design template Add SmartArt graphics to a presentation Add Media and Animations effects to a presentation		
	Templates, Slide Master, Views of PowerPoint, Formatting of Presentations : Inserting Graphics and Animations,	Apply graphical and animations on the Slides				
	Formatting & Customizing Presentations: Slide Transactions, Custom Animation, Inserting sounds. Set up and Custom Slide Show , Handouts.	Able to change the formatting of the slides, and insert the animations, sounds				


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BLIS I (SEMESTER I)

Information Communication Technologies (PAPER I) (BLIS – 103)

Max. Marks : 75 (50Ext; 25 Int)

Min. Marks: 30(20 Ext;10 Int)

Credit: 03

COURSE PLAN

SEM I Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JULY	UNIT-I Introduction: Computer, Definition, Block Diagram, Characteristics, Hardware & Software. Software & its types, User Interface: Concept of CUI & GUI. MS Windows, Desktop (My Computer, My Document, Recycle Bin, Internet Explorer. Start Menus, Taskbar, Windows Explorer.	Demonstrate the Use different software and its importance	PPT lecture, Comparison chart	Understand the functionality of software and its features. Identify the network concepts and its purpose. identify and work with basic Word tools and features	<u>Knowledge Based</u> - Why is software needed in computer? - Differentiate between Custom software and Utility software. <u>Understanding Based</u> - What is the use of AutoCorrect feature? You have to typed a document and	Knowledge--40 Understanding-40 Higher Order-20
	Network- Concept, Components, Topologies, LAN,WAN,MAN,VPN MS-Word: Introduction to MS- Word, Features, Application Areas & its uses, types of views, Creating & Saving: New Document & Templates.	importance of network concepts. And Able to use paragraph formatting, also able to create interactive graphical documents.	PPT lecture, Diagram Models Implement the various tools and features of MS Word	Edit text and modify the appearance of text in a Word document		

Course Plan 2019-20

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	Formatting, Editing & Printing: Cut, copy, paste, paste special, clipboard, undo, redo, Fonts, Paragraphs: Indentation & Spacing, Columns & Breaks, Styles, Themes, Find, Replace & Goto. Inserting Tables, Picture, ClipArt, Shapes, Symbols & Equations,			insert special characters and graphical objects organize data in tables	you want to check the spelling mistakes.. - Why we use watermark in MS-Word? How do you create a watermark in Word?	
	Hyperlink, Bookmark. Header & Footer. DropCap, Textbox, WordArt, Date & Time, Footnotes & Endnotes, Captions, Watermark, Page Color, page Borders, Page background. Mail merge, Macros, Spelling & Grammar, Auto correct & Auto text. Page Setup, Size, Margins, Gutter, Orientation.				<u>Higher Order Thinking Skills Based</u> - What is worksheet? Discuss the use of Auto fill option with the help of an example.	
AUGUST	UNIT-II MS-Excel: Introduction, Features, Application Areas & its uses, views & its types, formatting & its types, Functions & Formulas Date & Time: Date, day, month, year, now, today, time, hour,	Understanding the basic features and importance of functions in MS-Excel	Implementation of various functions and data representation	Navigate and perform common tasks in Excel spreadsheets, Formatting the paragraph, apply different	- What are keys? Explain the utility of	



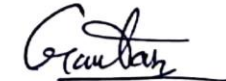
	minute, seconds.			types of charts	forms.	
	Math & Trig: abs, int, even, odd, fact, mod, pi, power, product, round, roman, sign, sqrt, trim. Statistical: Average, count.					
	Charts : Line, bar, column, area, pie. Data management: Sort, filters, auditing & tracing, Protecting sheet & workbook.	Able to use different charts and manage the data.				
SEPTEMBER- OCTOBER	UNIT-III MS-PowerPoint: Introduction to PowerPoint, Features, Application Areas and its uses, Creating Presentations through Blank Presentations,	Apply graphical and animations on the Slides	Implement the slide presentation, and graphics animations	Capable for creating Create and modify a database structure • understand about table		



	<p>Templates, Slide Master, Views of PowerPoint, Formatting of Presentations : Inserting Graphics and Animations, Formatting & Customizing Presentations : Slide Transactions, Custom Animation, Inserting sounds. Set up and Custom Slide Show , Handouts.</p>	<p>Able to change the formatting of the slides and insert the animations, sounds</p>		<p>relationships, data types and keys</p> <ul style="list-style-type: none"> • create simple and effective queries • create meaningful summery reports 		
	<p>MS-Access: Introduction, Concepts of databases, Data Types creating a database & tables, relationship, queries(select, update, delete), creating Auto forms and Auto reports.</p>	<p>Enable to Handle the database with Creating A Query Design, Applying Record Criteria, Reporting</p>	<p>Creating database and tables and extract data in efficient way.</p>			


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 Course Plan 2019-20


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B.B.A I (SEMESTER I)

Computer for Management (BBA – 106)

Max. Marks : 70 (50Ext; 20 Int)

Min. Marks: 40

COURSE PLAN

SEM I Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JULY	UNIT-I Introduction to Computer- Definition, Block Diagram, Characteristics, Hardware & Software its types, User interface- concept of CUI & GUI. MS Window, Desktop(My Computer, My Documents, Recycle bin, Network Places, Internet Explorer, Start Menus and taskbar & its properties, Window explorer)	Learn the importance of software and its types Basic feature of MS Window	PPT lecture, Comparison charts & Diagrams	Identify the features of common application of MS window.	<u>Knowledge Based</u> - Why is software needed in computer? - Differentiate between Custom software and Utility software. <u>Understanding Based</u> - What is the use of AutoCorrect feature? You have to typed a document and you want to check the spelling	Knowledge--40 Understanding--40 Higher Order-20
	MS-Word: Introduction to MS- Word, Features, Application Areas and its uses, types of views, Creating & Saving Formatting, Editing & Printing: copy, cut, paste, paste special, clipboard, undo, redo, Fonts,	Understanding the basic features and importance of MS- Word	PPT, Quiz,			



	<p>Paragraphs: Indentation and Spacing, Columns & Breaks, Styles, Find, Replace & Goto. Inserting Tables, Picture, ClipArt, Shapes, Smart Art and Charts, Symbols and Equations, Hyperlink, Bookmark. Header & Footer. DropCap, Textbox, WordArt, Date and Time. Footnotes & Endnotes, Captions, Watermark, Page Color, page Borders, Page background. Mail merge, Macros, Spelling & Grammar, Auto correct & Auto text. Page Setup, Size, Margins, Gutter, Orientation.</p>	<p>Able to use paragraph formatting, also able to create interactive graphical documents.</p>			<p>mistakes..</p> <p>- Why we use watermark in MS-Word? How do you create a watermark in Word?</p> <p><u>Higher Order Thinking Skills Based</u></p> <p>- What is worksheet? Explain the use of Autofill option with the help of an example.</p>	
AUGUST	<p>UNIT-II</p> <p>MS-Excel: Introduction, Features, Application Areas & its uses, views & its types, formatting & its types, Functions & Formulas (Text: char, concatenate exact, find, left, right, mid, lower, upper, proper, search, substitute,</p>		<p>Implement the various tools and features of MS Word</p>	<p>Navigate and perform common tasks in Word, such as opening, viewing, editing, saving, and printing documents, and configuring the application.</p>	<p>- What is Mail Merge tool in MS-Word? Write steps to merge a document file with non-</p>	



	trim. Logical: if, and , or, not.			Formatting the paragraph, apply different types of charts	document file.	
	Date & Time: Date, day, month, year, now, today, time, hour, minute, seconds. Math & trig: abs, int, even, odd, fact, mod, pi, power, product, round, roman, sign, sqrt, trim. Statistical: Average, count.					
SEPTEMBER-	Charts : Line, bar, column, area, pie. Pivot Tables, Data management: Sort, filters, auditing & tracing, Protecting sheet & workbook.					
	UNIT-III MS-PowerPoint: Introduction	Identify the importance of PPT features.		create a database structure using Access		



	to PowerPoint, Features, Application Areas & its uses, Creating Presentations through Blank Presentations, Templates, Existing Presentations, Views of PowerPoint,			<ul style="list-style-type: none"> • modify the structure of an existing table • add records to a new table • create simple and effective queries • create meaningful reports from tables • create and use forms 		
OCTOBER	Formatting & Customizing Presentations : Inserting Graphics & Animations, Slide Transactions, Custom Animation, Inserting sounds & movies, Set up & Custom Slide Shows. Rehearse Timing, Record Narration & Protecting Presentations. Slide Master, Handouts, Printing Presentations.	Apply graphical and animations on the Slides Able to change the formatting of the slides and insert the animations, sounds				
	MS-Access: Introduction, Concepts of databases, Data Types creating a database & tables, adding, editing & searching of records, queries(select, update, delete), creating forms and reports	Creating A Query Design, Applying Record Criteria Understanding Reporting In Access Creating A Basic Report Understanding Forms Creating A Basic Form.				

Course Plan 2019-20

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SOPHIA GIRL'S COLLEGE, AJMER (AUTONOMOUS)

M.SC Computer Science

MSC – 104 Database Management Systems

SEMESTER I (M.Sc PREV)

MAX MARKS: 100(70EXT; 30 INT)

MIN. MARKS: 40(28 EXT;12 INT)

COURSE PLAN

SEM I Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JULY	Unit - I Overview of Database: Basic DBMS terminology, Conventional File System Drawbacks,	understanding of essential DBMS concepts and enable to compare with traditional database	PPT, Comparison with Charts,	Understand the concept of dbms and its application, understand importance of Layer architecture of dbms.	<u>Knowledge Based</u> -Who is DBA? - Define the term Data and Information.	Knowledge--60 Understanding-30 Higher Order-10
	DBMS:Introduction, Advantages and Disadvantages, DBA and his responsibilities, Data Abstraction, Physical and Logical Data Independence,	importance the need of DBMS and role of DBA in DBMS	Layered architecture diagram.	Understanding of different data models	<u>Understanding Based</u> - Illustrate the advantages and disadvantages of DBMS. - What is the	

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	Architecture of DBMS: Client/Server Architecture, 2 Tier & 3 Tier.	Utilize a database modelling technique	Comparison Charts		difference between physical data independence and logical data independence ?	
AUGUST	Unit – II Entity-Relationship Model: Concept, Entity, Entity Set, Attributes, Relationships, Keys (Types), Generalization, Specialization, Aggregation, Overview of Hierarchical, Network and Relational Models, Comparison of Network, Hierarchical and Relational Models.	Apply the principles of data modeling using entity relationship	PPT, Diagrams, Models	Design ER-models to represent simple database application scenarios, Familiar with basic database storage structures and access techniques	<u>Higher Order Thinking Skills Based</u> - Discuss about how file organization is implemented using B+ tree?	
	File Organization: Introduction, Types (Sequential, Direct, Indexed sequential).	Understand the different file organization technique.	Graphically represent the relationship between database		- Explain the design of Entity Relationship diagram with a suitable example.	
	Indexes: Primary, secondary,	Build indexing mechanisms for efficient retrieval of	PPT, Diagrams, Examples			



	Multilevel, B Tree and B+ tree	information from a database.				
SEPTEMBER- OCTOBER	Unit - III Relational Algebra: Set Operators (Union, Intersection, Set-Difference, Cartesian Product),	Create and access the database using relational algebra operator			Understands the relational algebra concepts and operators which helps in understanding queries, Identifies the functional dependencies, • Improve the database design by normalization.	
	Relational Operators: (Select, Project, Rename, Join) , Decomposition of Relational Schemes, Dependencies and its types, Normalization up to DKNF.	good database design and normalization techniques to normalize a database.	PPT, tables, Examples			


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SOPHIA GIRL'S COLLEGE, AJMER (AUTONOMOUS)

B.C.A II (SEMESTER IV)

Data Base Management System-II (BCA-404)

Max. Marks : 75 (50Ext; 25 Int)

Min. Marks: 30(20 Ext;10 Int)

Credit: 03

COURSE PLAN

SEM I Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JANUARY	UNIT I Transaction Processing: Introduction-Transaction State, ACID properties, Concurrent Executions.	Concept of ACID properties	PPT, Charts,	Understand the concept of transaction process	<u>Knowledge Based</u> -What are the states of transaction?	Knowledge--60 Understanding-30 Higher Order-10
	Concurrency Control, Need of Serializability, Conflict vs. View Serializability, security, authorization access matrix,	functioning of Serializability	PPT, Practice Problem	Identify the use of Serializability	-Define the Dirty read Problem.	
	Database Failure and Recovery: Database Failures, Recovery Schemes: Shadow Paging and Log-based Recovery	Utility of database recovery technique	PPT, Quiz, Practice Problem	Understand the basic recovery techniques.	<u>Understanding Based</u> -Explain current page table and shadow page table.	
FEBRUARY	UNIT II Relational query language: DDL, DML, DCL, database integrity: entity integrity, domain integrity, referential integrity,	Apply database language on database	PPT, Diagrams, Practice Problem	Use different database models Apply different queries on the	- Why do we use SQL constraints?	



				database	Which constraints we can use while creating a database in SQL?	
	Introduction to SQL: Characteristics of SQL, Advantages of SQL, SQL data types and literals, Types of SQL commands, SQL operators, Tables	Identify the use of SQL				
	Constraints: Null Constraint, Primary Key, Unique key constraint, Foreign Key constraint, domain key constraint, Check Constraints, & Not Null.	Apply different constraints on database	PPT, Diagrams, Examples			
MARCH- APRIL	UNIT III Searching, Matching & Basic Oracle Functions: String, Numeric, and Aggregate Functions.	Apply different searching technique and methods.	Practice Examples	Understands the searching and matching technique.	<u>Higher Order Thinking Skills Based</u> - what is transaction? Explain the ACID properties of transaction. - Explain DDL, DML and DCL syntaxes with example.	
	Views and indexes, Queries based on group by clause, order by clause, having clause,		PPT, tables, Examples			
	Unions, Intersection, Minus SQL, Sub queries & joins.	Utilize different join operations	PPT, Comparison chart, database tables			

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SOPHIA GIRL'S COLLEGE, AJMER (AUTONOMOUS)
B.C.A II (SEMESTER IV)

Computer Graphics-II (BCA-406)

Min. Marks: 30(20 Ext;10 Int)

Max. Marks : 75 (50Ext; 25 Int)

Credit: 03

COURSE PLAN

SEM IV Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JULY	UNIT I Geometric transformations (translation, scaling rotation, reflection, shearing),	Basics of Coordinate System	PPT, Hand's On Exercise	Understand the basic concepts of 2-D transformation	<u>Knowledge Based</u> -Define Vanishing Point - what do you mean by Clipping?	Knowledge--60 Understanding-30 Higher Order-10
	2-dimensional graphics: Cartesian and Homogeneous co- ordinate system,	Concept of Homogeneous Coordinate system	PPT, Diagram Models			
	Window to Viewport transformation, Composite transformation, Affine Transformation.	Identify the concept window to view port	PPT, Hand's On Exercise		<u>Understanding Based</u> - Write the matrix for 2-D rotation. - What is the need of homogeneous coordinates?	
AUGUST	UNIT II Clipping Techniques: Clipping in Raster, point clipping, Line clipping,	Apply Various Clipping techniques	PPT, Flow Charts	Understand the clipping technique.		



	Cohen-Sutherland Line clipping Algorithm, Cyrus-Beck Line clipping Algorithm.					
	3-D viewing Mathematics of Projections: Types of Projection: Parallel & Perspective.	Understand the different types of Projection	PPT, Diagrams, Examples			
SEPTEMBER-OCTOBER	UNIT III Introduction to 3-dimensional Graphics: Geometric Transformations Translation, Scaling, Rotation	Concepts of 3-D transformation	PPT, Diagrams, Hand's On Exercise	To understand the basics of 3-D transformation, viewing transformations	<u>Higher Order Thinking Skills Based</u> - What are different types of projections in computer graphics? Explain with example. - What are the various 2-D transformations ? Discuss translation and scaling with examples.	
	Visible line identification, Visible Surface Detection (Back-face, Painter's Algorithm),		PPT, Flow Charts			
	Polygon (surface, table, equation, meshes).	Basic concepts of Surface of Polygon	PPT			


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Max. Marks : 75 (50Ext; 25 Int)

B.C.A III (SEMESTER VI)
BCA-605 Internet Tools & Website Development (PAPER II)

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 (%)
SEM I JANUARY	PHP – Introduction, Common Uses of PHP, Characteristics of PHP, PHP – Environment Setup Installation on Windows	Basic concepts of PHP	PPT	Understand concept of PHP and its features	<u>Knowledge Based</u> - What are super global variables -Write the connectivity string in php with mySql database.	Knowledge--50 Understanding-35 Higher Order-15
	PHP– Syntax, Running PHP Script from Command Prompt PHP – Variable, Local Variables, Global Variables, Static Variables, Constants, Operator Types, Precedence of Operators	Understand the basic syntax and rules	PPT, implementation with programming		<u>Understanding Based</u> - PHP is server side language or client side language? Explain your answer.	
FEBRUARY	UNIT-II PHP: Decision Making: If...Else Statement, Else If Statement, Switch Statement, Loop Types:, while , do...while, for, for each, break, continue	Understand the basic programming structures	PPT Lectures, Quiz, implementation with programming	To understand the importance of programming loops & conditional statement	- Differentiate between \$_GET and \$_POST methods in PHP.	
	Arrays : Numeric Array,	Identify the structure and types	PPT lecture, implementation			



	Associative Arrays, Multidimensional Arrays,		with programming			
	Strings function, Web Concepts, GET and POST, File Inclusion, File & I/O	Importance of various functions and file operations	PPT, practical implementation	Understand the concept of file handling	<u>Higher Order Thinking Skills Based</u> - What are Cookies? How are they created, used and deleted in PHP? Give examples.	
MARCH- APRIL	UNIT-III PHP : Functions, Cookies, Sessions, Sending, File Uploading, Error and Exception Handling, PHP	Handle programming error	PPT, practical implementation	Identify the programming errors and handle the errors.	- Describe PHP file permissions. Also explain the functions which are used to open and close a file in PHP.	
	PHP and MySQL: Connecting to MySQL Database, Create MySQL Database Using PHP	Connecting with database	PPT, practical implementation	Understand the connectivity with database.		
	Insert MySQL Database Using PHP, Delete Data to MySQL Database, Retrieving Data from MySQL Database	Understand the basic concepts of database	PPT, practical implementation			

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Department of Computer Science
Sophia Girls' College
(Autonomous), Ajmer



V.C.A I (SEMESTER II)

PC Software (PAPER II) (VCA – 202)

Max. Marks : 75 (50Ext; 25 Int)

Min. Marks: 30(20 Ext;10 Int)

COURSE PLAN

SEM II Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JANUARY	UNIT-I MS-Excel: Introduction, Features, Application Areas and its uses, views and its types, formatting and its types.	Learn the importance of software and its types	PPT, Comparison chart	Identify the features of common application of MS window.	<u>Knowledge Based</u> - Why is software needed in computer? - Differentiate between Custom software and Utility software.	Knowledge---40 Understanding-40 Higher Order-20
	Charts: Line, bar, column, area, pie. Pivot Tables,	Demonstrate the features of MS Window.	PPT, Quiz			
	Data management (Sort, filters, Validation, consolidation, Text to column), auditing and tracing.	Identify the tools of Control Panel	PPT		<u>Understanding Based</u> - Write in brief about the use of different view of	



FEBRUARY	UNIT-II Functions and Formulas -Text: char, concatenate exact, find, left, right, mid, lower, upper, proper, search ,substitute, trim.	Understanding the basic features and importance of MS-Word	Implement the various tools and features of MS Word	identify and work with basic Word tools and features Edit text and modify the appearance of text in a Word document	a document available in MSWord. - List the features of MS Word.	
	Logical: and, or, not Math and trig: abs, int, even, odd, fact, mod, pi, power, product, round, roman, sign, sqrt, trim.	Able to use paragraph formatting, also able to create interactive graphical documents.		insert special characters and graphical objects organize data in tables	<u><i>Higher Order Thinking Skills Based</i></u> - What are drives and folders? How does MS Window organize files and folders on drives? - Why we use watermark in	
	Statistical: Average, count. Protecting sheet and workbook.	Able to create tables and mailing technique to send the dic file.			MS-Word? How do you create a watermark in Word?	
MARCH- APRIL	UNIT-III MS-Access: Introduction, application areas and its uses, concepts of databases, datatypes,	Identify the importance of PPT features.	Implement the slide presentation, and graphics animations	customize the PowerPoint environment and a design template Add SmartArt graphics to a presentation Add Media and Animations		
	creating a database and tables, Records Insertion, creating and	Apply graphical and animations on the Slides				



	customizing a form,			effects to a presentation		
	creating and customizing reports, queries and its types(Select, Update, Delete)	Able to change the formatting of the slides, and insert the animations, sounds				


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SOPHIA GIRL'S COLLEGE, AJMER (AUTONOMOUS)

M.SC Computer Science (PREVIOUS)

Compiler Design

SEMESTER II (M.Sc PREV)

MIN. MARKS: 40(28 EXT;12 INT)

MAX MARKS: 100(70EXT; 30 INT)

COURSE PLAN

SEM II Month	UNIT/TOPIC	Concepts/facts	Teaching Pedagogy	Learning Outcomes	Questions	Marks Weightage (%)
SEM I JANUARY	Unit - I Overview of the Translation Process, A Simple Compiler, Difference between interpreter, assembler and compiler. Overview and use of linker and loader, types of Compiler, Analysis of the Source Program,	Demonstrate the purpose and use of compiler.	PPT, Comparison with Charts	Understand the concept of compiler and its uses.	<u>Knowledge Based</u> - How single pass and multi-pass compiler works? -What is the role of parser? - <u>Understanding Based</u> - Explain Linker and Loader.	Knowledge--60 Understanding-30 Higher Order-10
	The Phases of a Compiler, Cousins of the Compiler, The Grouping of Phases, Lexical Analysis, HardCoding and Automatic Generation Lexical Analyzers, Front-end and Back-	importance the difference phase of compiler and types of compiler	Layered architecture diagram. Diagram Models,		- What is the difference between compiler and a	



	end of compiler, pass structure				Interpreter.	
	Lexical Analyzer: Introduction to Lexical Analyzer, Input Buffering, Specification of Tokens, Recognition of Tokens, A Language for Specifying Lexical Analyzers, Finite Automata From a Regular Expression, Design of a Lexical Analyzer Generator, Optimization of DFA	Analysis the functionality of Lexical Analyzer.	Diagram Models, Implementation of DFA	Knowledge about the different phase of compiler	<p><u>Higher Order Thinking Skills Based</u></p> <p>- Write difference between bottom-up and top-down parsing with suitable example.</p>	
FEBRUARY	<p>Unit – II</p> <p>Parsing Theory: Top Down and Bottom up Parsing Algorithms, Top-Down Parsing, Bottom-Up Parsing, Operator-Precedence Parsing, LR Parsers, Using Ambiguous Grammars, Parser Generators,</p>	Identify the Parsing technique	PPT, Diagrams, Models. Implementation of Grammar Rules	Identify the functionality of different types of compiler	<p>- How do the parser and scanner communicate? Explain with the block diagram communication between them.</p>	



	Automatic Generation of Parsers. Syntax-Directed Definitions, Construction of Syntax Trees, Bottom-Up Evaluation of S-Attributed Definitions, L-Attributed Definitions, syntax directed definitions and translation schemes	Generate a Parsing tree by using grammar rules.				
ARCH- APRIL	Unit - III Code Optimization: Global Data Flow Analysis, A Few Selected Optimizations like Command Sub Expression Removal, Loop Invariant Code Motion, and Strength Reduction etc.	Understand the optimization technique.	PPT Lecture, Diagram Models,	Understand the different types of optimization technique		
	Code Generation: Three-Address Code, Addresses and Instructions, Quadruples, Triples, Static Single-Assignment Form, Issues in the Design of a Code Generator, The Target Machine, Basic Blocks and Flow Graphs, A Simple Code Generator	Identify the different types of optimization technique		Code generation Mechanism		

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