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Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B. C.A I (July 2019 - Dec 2019)

Subject - Pc Software

Teacher - Prof. Meenakshi Vyas

Day/Lecture	Unit	Topic
1	I	Introduction to MS windows: concept of operating system
2		operating system defination and its functions.
3		Basic components of windows,icons,types of icons,taskbar.
4		title bar,running applications,exploring computer cocepts
5		folders,cpying and moving files and folders.
6		control panel - display properties,adding and removing software
7		hardware,setting date and time
8		screen saver and appearance,using windows accessories.
9		practical on using properties of control panel
10		practical on basic computer concepts.
11	II	Documentation using MS-word- Introduction to office automation
12		creating and editing document,formatting document
13		Autotext,Autocorrect,spelling and Grammar
14		Tool,document dictionary,page formatting
15		Bookmark,advance features of MS-word Mail Merge
16		concept of Macro and its use.
17		how to work with Tables,file management concept
18		printing styles,linking and embedding objects,Template
19		practical on Mail Merge
20		practical on Macro.
21	III	Electonic spread sheet using MS-Excel
22		Introduction to MS Excel,creating and Editing worksheet
23		formatting and essential operations.
24		using formulas and functions
25		charts,advance features of MS-Excel
26		MS-Excel-pivot table &pivot chart
27		Linking and consolidaion
28		practical on how to use formulas and functions
29		practical on how to use pivot table and chart
30		practical on how to Edit worksheet.
31	IV	Database management using MS- Access
32		Introduction to MS-Access: creating database
33		Creating database tables
34		primary key,Relationship concept
35		forms and Reports.
36		DBMS queries
37		practical on how to create database
38		practical on how to create forms,tables and reports in database
39		practical on how to apply queries in database.
40	V	presentation using MS-Powerpoint: presentation
41		creating,Manipulating & Enhancing slides
42		organizational charts,Excel charts,word Art

43		layering art objects
44		Animation and sounds,inserting animated pictures
45		accessing through objects
46		inserting recorded sound effects
47		In-built sound effects.
48		practical on how to create slides in powerpoint
49		practical on how to apply animation effect in powerpoint
50		practical on how to apply sound egffect in power point.

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Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B. C.A I (July 2019 - Dec 2019)

Subject - **PC Software Practical**

Teacher - Prof. Meenakshi Vyas

Day/Lecture	Topic
1	Create a document and applying different editing options of MS-Word
2	Create a Resume with different formatting options
3	Create an invitation using Mail-Merge
4	Create a document and show use of Macro
5	Create a document and insert header and footer
6	Create a document and insert different Even and Odd header and footer
7	Create a document and insert/draw a table using table handling features
8	Demonstrate folder creation, rename, copy, cut, paste and move
9	Demonstrate Cell, Cell range, Row range and Column Range
10	Create a workbook to store student information
11	Create a workbook to generate a marksheet
12	Create a workbook to generate payroll of employees
13	Perform Operations on Sheet as Rename, Insert, Delete and Move
14	Demonstrate to insert different types of charts in worrksheet
15	Create a workbook showing Marks obtained, Percentage and status of students
16	Create a workbook and apply different operation such as sorting, filtering and hiding
17	Demonstrate Cell, Cell range, Row range and Column Range
18	Demosntrate types of powerpoint presentation
19	Create a presentation using auto content wizard
20	Create a presentation using Blank and apply customized options
21	Create a presentation using design template wizard
22	Demosnatrate to insert word art, clipart and pictures in prersentation
23	Demosnatrate to insert audio and videos in prersentation
24	Design a presentation and demonstrate options of custom animation

25	Design a presentation and demonstrate slide transition and different options of view show mode
26	Design a presentation and demonstrate different views of power point
27	Design a presentation and demonstrate different views of power point
28	Design a presentation and demonstrate different views of power point
29	Demonstrate insertion of charts and different shapes in power point presentation
30	Show the components of E-mail
31	Create an E-mail account

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B.C.A. I SEM (July 2019 -Dec2019)

Subject - Programming & Problem Solving through C-I

Teacher - Prof. Shailesh Hirve

Day	Unit	Topic
1	I	Intro to Programming Language
2		Types of Programming Language
3		Algorithm and Properties
4		Flow Charts
5		Programming Techniques
6		Translators
7	II	Intro to C Programming
8		Basics of C
9		Basics of C
10		Data Types of C
11		Basic Programs
12		Basic Programs
13		Storage Classes
14		Storage Classes Programs
15		Type Conversion in C
16	III	Control Statements of C
17		Control Statements of C
18		Programs of Control Statements
19		Programs of Control Statements
20		Loop Statements of C
21		Loop Statements of C
22		Loop Statements Programs
23		Loop Statements Programs
24		Difference among Loops
25		Operators in C
26		Operators in C
27		Intro to Array
28		Array Programs
29		Array Programs
30		2D Array Implementation
31		2D Array Programs (Matrix)

32	IV	2D Array Programs (Matrix)
33		2D Array Programs (Matrix)
34		Concept of Sorting
35		Bubble Sort
36		Concept of Searching, Searching Methods
37		Linear & Binary Search
38		String Functions & Programs
39		String Functions & Programs
40	V	Structures in C
41		Structure Programs
42		Structure Programs
43		Array of Structure
44		Structure of Structure
45		Structure Programs
46		Preprocessors
47		Preprocessors
48		Preprocessors

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B.C.A. I SEM (July 2019 -Dec2019)

Subject - Programming & Problem Solving through C-I Practical

Teacher - Prof. Shailesh Hirve

Day	Topic
1	Basic Programs ussing data types
2	Basic Programs ussing data types
3	Basic Programs ussing data types
4	Basic Programs ussing data types
5	Basic Programs ussing data types
6	Storage Classes Programs
7	Storage Classes Programs
8	Storage Classes Programs
9	Type Conversion Programs
10	Type Conversion Programs
11	Programms ussing Control Statements
12	Programms ussing Control Statements
13	Programms ussing Control Statements
14	Programms ussing Control Statements
15	Programms ussing Control Statements
16	Programms ussing Control Statements
17	Programms ussing Control Statements
18	Programms ussing Control Statements
19	Programms ussing Loop Statements
20	Programms ussing Loop Statements
21	Programms ussing Loop Statements
22	Programms ussing Loop Statements

23	Programms ussing Loop Statements
24	Programms ussing Loop Statements
25	Array Implementation
26	Array Programs
27	Array Programs
28	2D Array Implementation
29	2D Array Programs (Matrix)
30	2D Array Programs (Matrix)
31	2D Array Programs (Matrix)
32	Bubble Sort
33	Insertion Sort
34	Selection Sort
35	Linear Search
36	Binary Search
37	String Functions & Programs
38	String Functions & Programs
39	Structure Programs
40	Structure Programs
41	Array of Structure
42	Structure of Structure
43	Structure Programs
44	Structure Programs
45	Preprocessors Programms
46	Preprocessors Programms
47	Preprocessors Programms

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Department of Computer Science

Lesson Plan - BCA Ist Sem (July 2019 -Dec2019)

Subject - Digital Computer Organization

Teacher - Shwetanjali Vijayvargiya

Day/Lecture	Unit	Topic
1	1	Block diagram of Computer.
2		Explain Stored program, Word length and Processing speed of Computer
3		Explain Hardware/Software Concept.
4		Microprocessor and Single chip microprocessor.
5		Input devices:Keybord and mouse
6		Input devices:joystick,scanner
7		Output devices:Printer with types of printer.
8		Output devices:Plotter and display devices..
9		Revision of 1st unit.
10		Class test.
11	2	Number system: Decimal, binary, octal, hexadecimal.
12		conversion b/w Number system with question
13		some more question on number system conversion
14		Explain ASCII, grey code excess-3 code.
15		Explain BCD numbers and problem on them.
16		binary addition and binary subtraction.
17		1's and 2's compliment methods for subtraction.
18		multiplication and division of binary number.
19	3	Explain Logic gates: NOT, OR, AND.
20		Explain NAND, NOR, XOR, XNOR gates
21		Boolean Algebra and question based on boolean algebra.
22		some more question on boolean algebra.
23		De Morgan's Theorem and Half adder,full adder.
24		Application of gates.
25		Boolean functions & truth table
26		SOP, POS, minterms.
27		Simplification of logical circuits using Boolean algebra and karnaugh maps.
28		solve question of logical circuits using Boolean algebra and karnaugh maps.
29		solve question of logical circuits using Boolean algebra and karnaugh maps.
30		Revision of 2nd and 3rd unit.
31	4	Flip- Flop: RS-flip flop, level clocked D
32		F/P edge triggered D and edge triggered JK flip flop
33		racing in F/F, JK masters-slave flip flop
34		Registers.
35		buffer and shift registers
36		counters: ripple counters, synchronous counters.
37		ring counters and Mod counters.
38		revision of 4th unit.
39		Explain computer memory.
40		Main memory with type.(RAM and ROM).
41		Secondary memory:Harddisk,flopy disk
42		magnetic tape and optical disk.

43	5	pen drive.
44		Cache memory with type.
45		Transfer of information b/w I/O device,CPU and Memory
46		Programmed I/O and Interrupt-Driven I/Owith flowchart
47		Direct Memory Access
48		Revision
49		Revision
50		Class test.

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Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA II (Jan 2020 - June 2020)

Subject - C- Programming - II

Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Unit	Topic
1	I	C language programming structure,
2	I	What is function?, its syntax, function declaration and its applications & uses
3	I	Classification of functions with hierarchical diagram: Library and User defined fucntions
4	I	Call by value and Call by reference, Scope of fucntions
5	I	Key points about function, return() and its valid types used in C
6	I	Function Prototyping, what is Macro?
7	I	Difference between function and macro,
8	I	What is recursion? Its uses, application and types
9	II	Introduction of Pointer, its declaration and types of pointers
10	II	Operators of Pointer: Address of (&) and Indirection(&)
11	II	Pointer and Array, Passing array as a parameter of function
12	II	Accessing of 1D and 2D array elements using Pointer
13	II	pointer Array and Array of Pointer
14	II	Structure & pointer, Pointer of Sructures
15	II	Memory allocation and Deallocation functions; Malloc(), Calloc() and Realloc(), free()
16	II	What is Union? Declaration and Accession of union elements using period operator.
17	II	Initialization of union elements, structure of union and union of structures
18	II	Difference between strcuture and union
19	III	What is Input and Ouput function?, types of console I/O functions
20	III	unformatted I/O functions: putchar(), getchar(), gets(), puts(), getch(0 and getche()
21	III	Formatted I/O functions: print(), scanf(), sprintf() and sscanf()
22	III	disk I/O funtions unformatted: fgetc(), fputc(), fgets(), fputs() and formatted; fscanf(), fprintf()
23	III	What is file?, type of files used in C: Text and Binary
24	III	Operations on file: Naming, Opening, Reading, Writing, Closing and Update
25	III	difference between text and binary mode(EOF, Nweline and Storage of Numbers)
26	III	Input Output statement used in file handling: Character I/O, String I/O, Formatted I/O and Record I/O

27	III	Detection of error in file handling: Ferror(), Feof() and clearerr()
28	III	Input Output redirection in DOS?
29	IV	Introduction of display adopters, VDU and its Different standards given by VESA,
30	IV	Types of VDU: CRT, Flat-Panel, LCD, LED, Plasma
31	IV	Display modes: CGA, EGA,VGA, SVGA, XGA, SXGA and UXGA
32	IV	Introduction of Pixel, resolution: number of Pixels in a row and number of pixels in a column
33	IV	Colors in text and graphics mode: Intenstiy and components
34	IV	Introduction of video pages, number of video pages supported by diffferent display modes
35	IV	Text and binary modes to write into memory
36	V	Graphics programming, Draw(Lines, Stylish Line and Drawing and filling images using different built-in functions of grapohics.h)
37	V	library functions of Drwa line: Line(), getmaxx() and getmaxy(), gatemaxcolor(),
38	V	Kbhit(), Random() and setline-style() using different parameters
39	V	use of initgraph() and closegraph(), setcolor() fucntion to fill relular and non-regular images
40	V	Patterns with a difference, bar() fucntion and its uses, floodfill()
41	V	Palettes of colors: getpelette(), setllpelette(), setpelette() and setfillstyle() and Text output: outtext() and outtextxy()
42	V	Font programming: settextsytle(), setusercharsize() and justification of fonts: textheight() and textwidth() and settextjustify()
43	V	Animation:getimage() and putimage() and sytem metrics and rotation

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Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA II (Jan 2020 - June 2020)

Subject - C- Programming - II Practical

Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Topic
1	Program to print addition of two numbers using function
2	Program to print reverse string using function
3	Program to print table of given number using function
4	Program ot print factorial of any given number using function
5	Program to perform recursion using function
6	Program to find maximum, Even or Odd, swaping of values to two varibles using fucntion
7	Program to print value of a variable using pointer
8	Program to Call by vaue and Call by reference
9	Program to print array elements
10	Program to print sum of array elements
11	Program for passing array as argument of fucntion
12	Program for sorting array elements
13	Program to remove duplicate elements of an array
14	Program for array of stuctures
15	Program using putc(), getc() function
16	Program using putchar(), getrchar() function
17	Program using sprintf() and sscanf() function
18	Program to declare and print structure elements
19	Program to print student records using array of structure
20	Program to create a file and write data into it
21	Program to perform different operations on file using(feof(), fwrite, fread() functions)
22	Program to append in existing file
23	Program to copy contents of one file into another
24	Program for merge contents of two files
25	Program to open an existing file, read data from it and display on screen
26	Program to draw a line using builtin graphics function
27	Progrm to draw circle, ellipse, rectengale

28	Program for moving car
29	Program for digital clock
30	Program for rotating fan and swastik

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Department of Computer Science

Lesson Plan - B.C.A-II(July 2019 -Dec2020)

Subject - Introduction To Information System

Teacher - Harshita sharma

Day/Lectu	Unit	Topic
1	I	Introduction to information system defination,meaning of information system
2		Explain concept of information system,need to learn information system
3		concept of competitive advantage of information system
4		Explain carrrers in information system
5		concept of fundamentals of data processing
6		Explain components of computer system
7		Explain application of computer based system
8	II	A system approach to problem solving- Explain scientific method of problem solving
9		Explain system approach-understanding a problem or opportunity
10		concept of developing and implementing a solution
11		Explain practically advantages of information system in browsers .
12		Explain system solution methodology.
13		Explain how to apply solution methodology
14		Explain different types of information system
15		concept of Transaction processing information system
16		concept of office Automation system
17		concept of knowledge work system
18		concept of Management information system
19		concept of Decision support system
20		concept of Executive support system
21	III	System concept and information system environment
22		Explain concept of system ,defination
23		Explain characteristic of system ,
24		concept of central objective of system
25	III	Explain elements of a system
26		Explain system types
27		Explain concept of system development life cycle
28		understanding and recognization of need
29		concept of feasibility study
30		concept of Analysis the requirement
31		Explain designing phase
32		concept of implementation the role of system analyst
33		Explain practically use of system types in project
34	IV	Detail concept of Management Information system
35		Explain meaning of Management Information system
36		Explain use of Management Information system
37		Explain process of Management Information system
38		practical implementation of how to manage information.
39		Explain concept of design
40		Explain system design consideration
41		concept of input and output designs
42		concept of how to design a form
43		concept of file organization
44		concept of database

45		Explain data management concept
46		practical implementation of how to manage data present in database
47		concept of file design and organize.
48	V	Introduction to E-commerce
49		concept of types of E-commerce
50		concept of E-commerce applications
51		understanding concept of electronic payment system
52		overview of communication system
53		Explain use and functioning of the internet
54		concept of www and digital marketing
55		concept of search Engine optimization

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Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B.C.A-II(July 2019 -Dec2020)

Subject - Introduction To Information System Practical

Teacher - Harshita sharma

Day/Lecture	Topic
1	How to store Information on web browser
2	Search engines and search engine marketing
3	practical impementation on concept of digital marketing
4	Email creation,Email writing ethics
5	campaign creation and management
6	keyword analysis
7	How to set web page ranking
8	understanding and creating google form
9	understanding and creating google adword and analytics
10	concept of search Engine optimization
11	practical exposure to social media
12	practical exposure to social media mining
13	Explain marketing through facebook
14	Explain how to create a channel on youtube
15	understanding social media measuring
16	understanding social media monitoring
17	understanding social media tracking
18	understanding social media monitoring platforms
19	Explain concept of creating and using blog
20	concept of use of blogs for forum and discussion

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Department of Computer Science

Lesson Plan - B.C.A. II SEM (Jan 2020 - April 2020)

Subject - Operating System Fundamentals

Teacher - Prof. Shailesh Hirve

Day	Unit	Topic
1	I	Introduction to OS , Functions of OS
2		Features of OS
3		Types of OS
4		Types of OS
5		System Call
6		Device Management, Device Drivers
7	II	Concepts of Process, States of Process
8		Process Management
9		CPU Scheduling, Scheduling Criteria
10		Process Scheduling Algorithms and examples
11		Process Scheduling Algorithms and examples
12		Process Scheduling Algorithms and examples
13		I/O Device Organization, Buffering
14	III	Introduction of Inter-process Communication
15		Types of Processes, Precedence Graphs
16		Critical Section Problem
17		Critical Section Problem
18		Concepts of Semaphore
19		Concepts of Semaphore
20		Classical Problem of Synchronization
21	IV	Classical Problem of Synchronization
22		Introduction of Deadlock, Characteristics of Deadlock
23		Deadlock Detection
24		Deadlock Prevention
25		Deadlock Avoidance
26		Methods for handling Deadlock
27		Recovery from deadlock
28		Concepts of memory management
29		Context Switch, Logical & Physical Address space
30		Contiguous & Non Contiguous memory allocation
31		Paging

32		Segmentation
33	V	Vertual Memory, Demand Paging
34		Page Replacement Algorithms
35		Page Replacement Algorithms
36		Page Replacement Algorithms
37		Frame allocation, Threshing
38		Demand Segmentation

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Department of Computer Science

Lesson Plan - BCA IIIsem (July 2019 -Dec2019)

Subject - Data Structure using C

Teacher -Shwetanjali Vijayvargiya

Day/Lecture	Unit	Topic
1	1	Introduction of Data Structures
2		Data Types in Programming Language
3		Abstract Data Structures
4		Array Data Structure
5		2D Array Implementation
6		Matrix Operations,String and File.
7		Linked List Insertion and Deletion with algo and program
8		Circular Linked List Creation and Deletion with algo and program
9		Doubly Linked List with algo and program
10		Circular Doubly Linked List with algo and program
11		Stack Using Linked List with algo and program
12		Queue Using Linked List with algo and program
13		Application of Linked List.
14	2	Stack Data Structure with algo and program
15		Infix to Postfix Conversion
16		Infix to Postfix Conversion Algorithm and Program
17		Infix to Prefix Conversion
18		Infix to Prefix Conversion Algorithm and Program
19		Postfix Evaluation Alloritham
20		Recursion using Stack
21		Queue Data Structure with algo and program
22		Circular Queue with algo and program
23		Double Ended Queue with algo and program
24		Priority Queue and Application of Queue.
25		Revision of 1st and 2nd Unit
26	3	Tree Data Structure and basic terminology
27		Binary trees and representation of tree.
28		Postorder, Preorder and Inorder Traversing
29		Application of Binary Tree
30		Program for Binary Tree
31		Binary Search Tree Program of Binary Search in Tree
32		Threaded Binary Tree
33		Expression Tree with question
34		Huffman algoritham
35		AVL Tree
36		B-Tree and B+Tree
37		Searching Methods
38		Linear and Binary Search
39		Program for Binary and Linear Search.
40		Bubble sort with Program

41	4	Selection sort with Program
42		Insertion Sort with Program
43		quick Sort with Program
44		heap sort with algoritham
45		Comparison of Sorting methoda.
46		Revision of 3rd and 4th Unit
47		Class test
48	5	Hash function with hash table
49		Collision resolution technique
50		Introduction of Graph with terminology
51		Graph Representation Methods- Matrix and list Representation
52		Graph Traversal technique-Breadth First Search and Depth First Search
53		Algoritham for BFS and DFS
54		Shortest path algorithm (Dijkstra's algo).
55		Revision.

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Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA IIIsem (July 2019 -Dec2019)

Subject - Data Structure using C(practical)

Teacher -Shwetanjali Vijayvargiya

Day/Lecture	Topic
	WAP to Store records of 100 students using array.
	WAP for Addition of two matrix.
	WAP for Multiplication of to matrix.
	WAP to find transpose of matrix.
	WAP for push and pop elements from Stack using array.
	Write an algoritham for convert infix expresion to postfix expression.
	Write an algoritham for evaluation of postfix expression.
	Insertion and deletion operation on queue using array.
	Insertion and deletion operation on circular queue using array.
	Program for Linear search.
	Program for Binary search.
	Program for Bubble sort.
	Program for selection sort.
	Program for Quick sort
	WAP for Linked List creation, insertion and deletion.
	Push and pop operation on stack using linked list.
	Insertion and deletion operation on queue using linked list.
	Insertion and deletion operation on circular queue using linked list.
	Doubly Linked List creation, insertion and deletion
	Insertion and deletion of Binary search tree.
	Traversal of Binary search tree(inorder, preorder, postorder)
	Complete program for Binary search tree.

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Department of Computer Science

Lesson Plan - BCA III Sem(July 2019 -Dec2019)

Subject - OOPs through C++

Teacher - Prof. Meenakshi Vyas

Day/Lecture	Unit	Topic
1	1	Introduction to C++
2		Difference Between C & C++
3		Adavantages of OOPs
4		Disadvanctages of OOPs
5		Basic Concept of object-oriented programming
6		Basic Concept of object-oriented programming
7		Characteristics of OOPs
8		Applications of OOPs
9	2	C++ programming basics
10		basic program structure
11		basic program structure
12		data types
13		data types
14		Operators
15		Manipulator
16		type conversions
17		C++ stream class
18		if, if-else
19		Nested if-else
20		switch-Case.
21		Jump statement: break, continue, go to, exit.
22		loops -for
23		while
24		Do while
25	3	Function and arrays.
26		Function and arrays.
27		Class structure-access specifiers
28		Accessing Public Private and Protected Data
29		Member function,Inline Function
30		Friend function - independent function
31		Friend function -member Function
32		Explain Constructors and types of constructors
33		Constructors and Explain destructure with program.
34		String Functions
35		String Functions

36	4	Data encapsulation & Polymorphism
37		Operator overloading (unary and binary) with example.
38		Programs for operator overloading.
39		Function Overloading.
40		Virtual Fuction
41		Virtual Fuction
42		Pure Virtual Function
43		Doubt Clearing
44	5	Explain Inheritence and types of inheritence.
45		continue with inheritence… and programs of inheritence
46		visibility mode in inheritence with program.
47		Programs of different type of inheritence
48		Virtual Base Classes with example.
49		Abstract Classes
50		Function Templates
51		Class Templates
52		Exception Handling
53		Exception Handling
54		Exception Handling

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Department of Computer Science

Lesson Plan - BCA III Sem(July 2019 -Dec2019)

Subject - Practical OOPs through C++

Teacher - Prof Meenakshi Vyas

Day/Lecture	Topic
1	WAP to print your Name.
2	WAP to demonstrate the use of (a) variables and (b) constants.
3	WAP to Simple I/O Function.
4	WAP to find (a) Simple Interest and (b) Compound Interest
5	WAP to show use of scope resolution operator.
6	WAP to allocate & deallocate memory.(new & delete operator)
7	WAP show use manipulators (iomanip.h).
8	WAP to demonstrate type casting in C++.
9	WAP to find greater number from 2 given numbers.
10	WAP to find greatest of three numbers.
11	Display Discount as per followings :-
12	Up to 1000 discount 2 %
13	Up to 5000 discount 10 %
14	Up to 10000 discount 25 %
15	Above 10000 discount 40 %
16	WAP to show use of && and || operator in if condition(suggestion -Leap Year)
17	WAP using switch-case.
18	WAP to print table/numbers from 1-10.
19	WAP to calculate Factorial of a number.
20	WAP to find sum of digits in a number using while.
21	(If 3 digits No. is123 then 1+2+3=6)
22	WAP to check whether a given number is Prime or not.
23	WAP to display elements of an array.
24	WAP to calculate Sum and Average of an array.
25	WAP to sort elements of an array using Bubble sort.
26	WAP to add and subtract 2X2 matrices.
27	WAP to add and subtract 3X3 matrices.
28	WAP to multiply 2X2 matrices.
29	WAP to multiply 3X3 matrices.
30	WAP to ADD, Subtract, Divide and Multiply 2 numbers using Do- While.
31	WAP to create a function using call by Value.
32	WAP to create a function using call by reference.
33	WAP to create a function with default and const arguments.
34	WAP to take i/p & O/p using function.
35	WAP to demonstrate function recursion.
36	WAP to show function Overloading.
37	WAP to input string.

38	WAP to show use of inicap function .
39	WAP to find length of string.
40	WAP to copy String into another String.
41	WAP to concatenate 2 Strings.
42	WAP to compare 2 Strings.
43	WAP to reverse string.
44	WAP to change case of String
45	WAP to add inch and feet using structure.
46	WAP to change price of book using structure with function
47	Explain a structure to define class, object and member function.
48	WAP for accessing public member of class
49	WAP for accessing private member of class
50	WAP for accessing protected member of class.
51	WAP to show use of inline function.
52	WAP to display operator overloading
53	WAP for default constructer.
54	WAP for parameterized constructer.
55	WAP for copy constructer.
56	WAP for dynamic constructer
57	WAP for simple destructor.
58	WAP for constructer & destructor
59	WAP for accessing private member function.
60	WAP to access private member function
61	.WAP for friend function.
62	.WAP for friend function working as a bridge between two classes.
63	WAP for this pointer.
64	WAP for static data member & member function.
65	WAP for overloading of binary operator using friend function.
66	WAP for overloading of unary operator using friend function.
67	WAP to compare complex no. using class.
68	WAP for single inheritance.
69	WAP for multilevel inheritance.
70	WAP for multiple inheritances.
71	WAP for hierarchical inheritance.
72	WAP for hybrid inheritance.
73	WAP for constructor and destructor using inheritance.
74	WAP for virtual function
75	WAP to show use of class templates
76	WAP to show use of class templates
77	WAP for toss.
78	WAP to show bank process.
79	WAP for lift operation

Maharaja R

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA III (July 2019 - Dec 2019)

Subject - UNIX Operating System

Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Unit	Topic
1	I	Introductuion of operating system, its logical architecure
2	I	Types of Operating system:CLI and GUI(Batch, Time-sharing, Multitasking, Multi processor, Real time and embeded)
3	I	Fucntions of Operating system, Introduction of UNIX O.S.
4	I	Features of UNIX OS, types of UNIX, version of UNIX
5	I	Kernel, Shell and Kernel -Shell relationship with diagram
6	I	Having an account and password to access UNIX network
7	I	File system of UNIX with hierarchical diagram
8	I	File Structure of UNIX: Boot block, Super block, i-nodelist and Data block
9	I	Basic commands: md/mkdir, rmdir, ls,cp, rm, mv, cat(its uses), clear and tput
10	I	utility command: cal, date, who, who am I, echo, banner, tty, stty, passwd,bc, printf, uname
11	II	Utilities: more, od, file, sc cmp, comm, diff, tar I/O redirectionscommands
12	II	Introduction of Bourne shell, features and its commands: pipe, tee
13	II	Pattern matching: *, ? and range[] with file name
14	II	shell variable: declaration, Initilization and print with echo command, chmod command to change file permission, pipe command
15	II	Rules for defining shell variables, local and Environment shell variable with its scopes, Activities performed by shell
16	II	Introduction of shell script and shell script execution
17	III	Introcution of filters: pr, head, tail, cut, paste, sort uniq and nl
18	III	Advanced filters: grep, egrep, fgerp, sed, tr, join , awk and wait
19	III	what is process?, different shell process, parent and child process: ps command to know process status
20	III	Process creation phases: fork(), exce() and wait(),
21	III	How to know running system process(ps -e)
22	III	Rules for defining shell variables, local and Environment shell variable with its scopes, Activities performed by shell
23	III	Run jobs in background using "&", logout safely, wait command
24	III	Premature termination of process using kill command and options used with kill command

25	III	Runs jobs with low priority with nice command and timing process with time command, Multiple jobs in foreground
26	IV	Introduction of communiation and sheduling: bulletin board with news command and its options
27	IV	Message of the day using news command, difference between bulletin board and message of the day
28	IV	users willness to talk with mesg command, Two- way communication with write command and its different options(codes)
29	IV	Introduction of dead lock condition and its reasons
30	IV	mail command to send messages to multiple users and to read receive messages from others
31	IV	Adress all users with finger command, execution of process later using at and batch command with different options
32	IV	Running jobs periodically using cron command and modify jobs schedule with corntab command
33	IV	Programming with shell: system variable, command line arguments, quotes, operators
34	IV	if-then-else and fi, switch statement, looping or iterative statements(for, while and until loops)
35	V	Introduction of system administrator (super user), different tasks of sysem administrator,
36	V	Types of accounts on Unix OS: Root, System and User
37	V	Managaing Users and Group: useradd, usermod, userdel, groupadd, groupmod, groupdel commands
38	V	Process of creation of user account and setting user environment
39	V	Process of deleting an user account, locking and unlocking user account
40	V	Software Maintenance: Patching, Source distribution, RPM packagesm Debian packages and other vendor distributions
41	V	Firewall, File system Security
42	V	Unix backup and File restoration: types of backup media

Maharaja R

Maharaja Ranjit Singh College of Professional Sciences,Ind

Department of Computer Science

Lesson Plan - BCA III Sem (July 2019 - Dec 2019)

Subject - UNIX Practical

Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Topic
1	Demonstrate Commands ls with different options, who, who am I, mkdir/md
2	Demonstrate Commands cat and its options, cd, mv,
3	Demonstrate Commands rm, pwd, date
4	Demonstrate Commands tty, stty, lp
5	Demonstrate Commands chmod with its different options
6	Basic operation Connecting and disconnecting from system
7	Basic operation Text and Graphics mode
8	Basic operation changing password and help facility
9	Demonstrate commands file, more and less
10	Demostrate basic filter commands head, tail, cut, paste
11	Demostrate basic filter commands wc with its different options
12	Demostrate basic filter commands sort, cmp, diff
13	Demostrate use of Pattern matching *, ? and Range []
14	Demonstrate commands echo and banner
15	Demonstrate advanced filter grep with different options
16	Demonstrate advanced filter fgrep with different options
17	Demonstrate advanced filter egrep with different options
18	Demonstrate advanced filter sed, tr with different options
19	Demonstrate commands wait, join and awk
20	Demonstrate command ps to know process status with options
21	Demonstrate process creation routine fork()
22	Demonstrate process creation routine exec()
23	Demonstrate process creation routine wait()
24	Demonstrate command to run process in background with "&"
25	Demonstrate command to kill process with numbers
26	Demonstrate command news, mesg, and finger
27	Demonstrate command corn and corntab

28	Demonstrate command at and batch to schedule process execution
29	Write a shell script to find maximum between two numbers
30	Write a shell script to print table of given number
31	Write a shell script to calculate factorial of given number
32	Write a shell script to enter 10 numbers from user , then print sum and average of them

Mahara

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA IV (Jan 2020-April2020)

Subject - Computer Oriented Numeriacal Methods

Teacher - Shwetanjali Vijayvargiya

Day/Lecture	Unit	Topic
1	1	Explain Floating Point Number Operations.
2		Explain Normalization and their consequences.
3		Solve problems using Bisection Methods.
4		Solve problems using False Position Methods
5		Solve problems using Secant Method
6		Solve problems using Newton Raphson Method
7		continue Newton Raphson method with more problems
8		Solve problems using Graffes Root Squaring Method
9		Convergence of Solution
10		programs of different methods
11		Revision.
12	2	Solution of Simultaneous Liner Equation Using Gauss Elimination Method.
13		Solution of Simultaneous Liner Equation Using Gauss Seidal Method
14		Solution of Simultaneous Liner Equation Using Gauss Jordan Elimination Method
15		Solution of Simultaneous Liner Equation Using Jacobi Method
16		Solution of Simultaneous Liner Equation Using Triangularization Method
17		Explain III Conditioned Equation and Pivoting Condensation using problems.
18		Least Curve Fitting method using problems
19		Continue Least Curve Fitting with more problems.
20		Non Linear Curve Fitting using Problems.
21		Revision of 1st and 2nd unit.
22	3	Definition Of Forward, Backward,Shifting Operators.
23		Definition of Divided Difference Central and Averaging Operators and Relationships b/w Operators.
24		Newton's Forward Interpolation Formula and solve problem using forward method.
25		Newton's backward Interpolation Formula and solve problem using backward method.
26		Newton's divided Interpolation Formula and solve problem using divided Interpolation method.
27		Lagrange's Interpolation Formula and solve problem using Lagrange's Interpolation method.
28		Continue Langrange's problem.
29		Revision of 3rd Unit
30		Class test of Three units.
31	4	Numerical Differentiation using Newton's Forward Interpolation Formula and solve problem using method
32		Numerical Differentiation using Newton's Backward Interpolation Formula and solve problem using method
33		Numerical Differentiation using Newton's divided Interpolation Formula and solve problem using method.
34		Solve Numerical Integration problem using Newton- Cote's Formula
35		Solve Numerical Integration problem using Trapezoidal Rule and Simpson's one Third Rule
36		Solve Numerical Integration problem using Simpson's Three Eight Rule.
37		Programs of different methods.
38		Revision of 4th unit.
39	5	Numerical Solutions of Ordinary Differential Equations using Euler's Method.
40		Numerical Solutions of Ordinary Differential Equations using Euler's Modifies Method.
41		Solve Problem using Tailor's Series Method.
42		Solve Problem using Picard's Method.
43		Solve Problem using Runga Kutta Second Order and Fourth order Method.
44		Revision
45		Programs of different methods.

Mahar

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA IV (Jan 2020-April2020)

Subject - Computer Oriented Numeriacal Methods(practical)

Teacher - Shwetanjali Vijayvargiya

Day/Lecture	Topic
	Write a program to convert floating point number into normalized floating point number.
	Write a program to add two floating point number and convert into normalized floatingpoint number.
	Write a program to solve real root of the equation using Bisection Method.
	Write a program to solve real root of the equation using Secants Method.
	Write a program to solve real root of the equation using Regular Falsi Position Method.
	Write a program to solve real root of the equation using Newton Raphson's Method.
	Write a program to solve simultaneous liner equation using Gauss Elimination Method
	Write a program to solve simultaneous liner equation using.Gauss Jordon's Method.
	Write a program to solve simultaneous liner equation using Jacobi's Method.
	Write a program to solve simultaneous liner equation using Gauss Seidal Method.
	Write a program for Newton's Forward Difference Formula.
	Write a program for Newton's Backward Difference Formula.
	Write a program for Newton's Divided Difference Formula.
	Write a program for Lagrange's Interpolation Formula.
	Write a program for evaluation of integral by Trapezoidal's Rule
	Write a program for evaluation of integral by Simpson's 1/3 Rule
	Write a program for evaluation of integral by Simpson's 3/8 Rule
	Write a program for Euler's Method.
	Write a program for Runga Kutta Second Order Method.
	Write a program for Runga Kutta Fourth Order Method

Maharaja R

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA IV (Jan 2020 - June 2020)

Subject - Software Engineering

Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Unit	Topic
1	I	Data, Information and system, types of system, its characteristics and components
2	I	Business system and its types, Environment
3	I	Introduction of software engineering: definition and application
4	I	System Analysis and its different phases
5	I	System requirement, SDLC and phases of SDLC
6	I	Continue phases of SDLC
7	II	Project Selection: Sources of Project request(deprtmental managers, senior executives, system analyst and outside group)
8	II	Managaing Project reivew and slection: different committee methods
9	II	recognition of need (preliminary investigation) and its methods
10	II	Fact Finding Techniques(Study of existing documents, PI, Questionniares, JAD, RAD, Onsight observation and researh on website)
11	II	Fesibility Anlaysis: Types of feasibility study
12	II	Economic Analysis: different types of Costs and Benefits occurred during project development
13	II	Cost and Benefit determination, steps of determining cost nad benefit analysis
14	II	Need of SDLC, Introduction of SDLC Models
15	II	Water fall, Spiral, V-Model and RAD Model
16	II	Big-Bang, Evolutionary, Prototyping
17	III	Introduction of Structured system analysis and its goals
18	III	SDLC with structured system analysis: Explosion of Process into sub processes
19	III	Tools of structured system analysis: DFD, its different sysmbols and rules of constructing DFD
20	III	Software design fundamentals: general defintion of design, its goal and software desing model
21	III	Arhcitectural, Procedural and software design fundamentals, software architecture
22	III	continue tools of SSA: Data dictionary, its formats and elements, Structured English
23	III	continue tools of SSA: Decision Tree and Decision table, its types

24	III	Object oriented design models: Object, Dynamic and Fucntional Model(DFD, Use-Case, Class. Object, Sequence, Collaboration, State, Activity, Component and Deployment)
25	IV	Data flow Oriented Desing
26	IV	Introduction of software quality assurance, Quality factor specification
27	IV	Software requirement, software desing, software testing and implementation
28	IV	Levels of quatliy assurance: Testing, Validation and Certification
29	IV	Software Testing fundamentals: Tetability, Operability, Observability, Controlabilit, Decomposability, simplicity, Stabiltiy and understandibility
30	IV	Charactericstics of Test: High probalility, Strategic approach to software tesing
31	IV	Validation and Verification, Conventional software architecture of testing
32	IV	Strategic Issues, Criteria for completion of testing
33	IV	Methods of Testing: While box, Black box, Gray box, Visual
34	IV	Levels of Testing: Unit, Integration and System
35	IV	Objectives of Testing: Regression, Acceptance, Alpha and Beta
33	V	Introduction of MIS, its featuers, characteristics and applications of MIS
34	V	Role of IT in MIS, business and Techonlogy ternds used in MIS
35	V	Development of Long Range Plans of the MIS
36	V	Content, Goal and Objectives of MIS
37	V	Architecutre of MIS: different approaches
38	V	Implementation of MIS & Applications of MIS in Service Industry
39	V	What is DSS?, Three tier architectuer of DSS, limitations of DSS
40	V	Characteristics of DSS, different users of DSS, types of DSS

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B.C.A. IV SEM (Jan 2020 - June 2020)

Subject - -DATABASE MANAGEMENT SYSTEM

Teacher - Prof. Shailesh Hirve

Day	Unit	Topic
1	I	Introduction of DBMS, purpose of DBMS, view of data,
2		Scheamas, Instances, Data Dictionary
3		Data Models
4		Data Models
5		Data Models
6		Database language, Database administrator,
7		Database user, overall system structure.
8		Data Independence and its types
9	II	Entity Relationship Model: Basic Concepts,
10		Relationships, Mapping Constraints,
11		Entity Set, weak Entity, Strong Entity, Entity Features
12		Types of Keys, Types of Attributes
13		E-R Model Notations, E -R Diagram
14		design of an E-R database schema
15		Reduction of E-R schema to table
16	III	Structured Query Language(SQL)
17		Basic structure, set operations, aggregate functions
18		Null values, Nested sub queries
19		Data Definition Language(DDL)
20		Data Manipulation Language(DML)
21		Data Control Language(DCL)
22		Transaction Control Language(TCL)
23		QBE,QUEL
24	IV	Pitfalls in Relational Database Design, Decomposition
25		Normalization using functional dependencies
26		Normalization using multivalue dependencies
27		Normalization using joined dependencies
28		Integrity Constraints:- domain constraints, entity integrity constraints, referential integrity constraints
29		Assertions
30		Triggers, Functions

31		Procedures, Cursors
32	V	Concept of RDBMS
33		Characteristics of RDBMS
34		Codd's 12 rules
35		Introduction to oracle tools, security

Maharaja Ranjit Singh College of Professional Sciences,Indor

Department of Computer Science

Lesson Plan - B.C.A. IV SEM (Jan 2020 - May 2020)

Subject - -DATABASE MANAGEMENT SYSTEM Practical

Teacher - Prof. Shailesh Hirve

Day	Topic
1	Introduction to SQL, DDL, DML, and DCL statements
2	Introduction to SQL, DDL, DML, and DCL statements
3	DDL Commands
4	DDL Commands
5	DDL Commands
6	DML Commands
7	DML Commands
8	DML Commands
9	various Form of SELECT- Simple, Using Special Operators for Data Access
10	various Form of SELECT- Simple, Using Special Operators for Data Access
11	various Form of SELECT- Simple, Using Special Operators for Data Access
12	various Form of SELECT- Simple, Using Special Operators for Data Access
13	DCL Commands
14	DCL Commands
15	TCL Commands
16	TCL Commands
17	Nested Queries & Exposure to Joins, Aggregate Functions
18	Nested Queries & Exposure to Joins, Aggregate Functions
19	Triggers
20	Functions
21	Procedures
22	Cursors

Mahar

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B. C.A IV (Jan 2020 - June 2020)

Subject - Programming with Java

Teacher - Harshita Sharma

Day/Lecture	Unit	Topic
1	I	Introduction to java,C++ vs java difference,internet & www
2		java support system,java environment,java program structure
3		tokens,statements,java virtual machine,constant& variables
4		concept of data types,declaration of variables,
5		scope of variables,symbolic constant concept
6		Type casting,operators: Arithematic,Relational,logical
7		Assignment,increment and decrement operator,conditional
8		Bitwise,special,expression and evaluation,statement concept
9		if statement.if..else statement,Nesing of if..else… statement
10		else...if ladder.switch? Operators,loops-while,Do-while
11		For,jumps in loops,labelled loops concept
12	II	Defining a class,how to add variables and method.
13		creating objects,accessing class members,constructors and its types
14		concept of method overlaoding,practical of method overlaoding
15		static members,nesting of methods
16		concept of inheritance,types of inheritance
17		Extending a class, concept of method overriding
18		concept of Final variables,classes,methods & its practical
19		how to implement concept of finalize methods
20		Abstract method and classes,visibility control
21		practical on how to create object and classes
22		practical on inheritance concept
23	III	Arrays: one dimensional and two dimensional array
24		String: methods and classes,vector,wrapper classes
25		defining interface: extending interface,implementing interface
26		accessing interface variable,practical on concept of interface.
27		concept of system packages,using system package
28		concept of adding a class to a package
29		concept of hiding a class to a package
30		practial on how to use one dimensional and two dimensional array
31		practical on how to create package and how to add class on it
32	IV	Creating Threads,extending the Thread class
33		stopping and blocking a Thread
34		life cycle of Thread class
35		how to use Thread classes and methods
36		Thread exception concept.
37		Thread priority concept
38		concept of synchronization of Thread
39		concept of implementing the Runnable Interface

40		practical on how to set Thread priorities
41	V	local and remote applet vs applications
42		Writing Applets,Applet Life cycle,creating and executable Applet
43		Designing a web page,Applet Tag,adding Applet to HTMLfile.
44		Running the Applet,passing parameters to Applet,aligning the display.
45		Html tags & Applet,geeting input from the user

Mahar

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B. C.A IV (Jan 2020 - June 2020)

Subject - Programming with Java Practical

Teacher - Harshita sharma

Day/Lecture	Topic
1	Write a simple java program to print hello
2	Write a program to print factorial of a number
3	Write a program to print fibonacci series
4	Write a program to find greatest of n numbers
5	Write a program to find whether a given number is even or odd
6	Write a program to find largest of three numbers
7	Write a program to check number is palindrome or not
8	Write a program to reverse a string
9	Write a program to convert string into upper and lower case
10	Write a program to swap two numbers without using a third variable
11	Write a program for string concatenation
12	Write a program to find longest word in a string
13	Write a java program to demonstrate the implementation of abstract class.
14	Write a java program to implement single level inheritance
15	Write a java program to implement method overriding
16	Write a java program to implement multiple inheritance.
17	Write a java program to implement method overloading through Interface
18	Write a java program to designed a class that demonstrates the use of constructor and destructor.
19	Write a java program to print largest among two numbers
20	Write a java program to print date and time
21	Write a java program to take input from user using scanner class
22	Write a java program to check given number is a leap year or not
23	Write a java program to print multiplication table using thread
24	Write a java program to print hello world using simple Runnable in Thread
25	Write a java program to implement thread life cycle.
26	Write a java program to implement multithreading.
27	Write a java program to open a file and display the contents in the console window.
28	Write a java program to copy the contents from one file to other file.
29	Write a java program to read the student data from user and store it in the file.
30	Write a java program to print missing number in an array
31	Write a java program to merge two Array
32	Write a java program for multiplying two matrices and print the product for the same.
33	Write a java program to add two matrices and print the resultant matrix.
34	Write a java program to sort 2-D Array
35	Write a java program to transpose matrix using one Array
36	Write a Applet program to display calculator
37	Write a Applet program to print different geomatric shapes
38	Write a Applet program to draw face
39	Write a Applet program to show clock timing
40	Write a Applet program to change Applet backgroun color using scrollbar

Maharaja

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B. C.A V (July 2019 - Dec 2019)

Subject - Programming with Java

Teacher - Harshita sharma

Day/Lectu	Unit	Topic
1	I	Introduction to java,C++ vs java difference,internet & www
2		java support system,java environment,java program structure
3		tokens,statements,java virtual machine,constant& variables
4		concept of data types,declaration of variables,
5		scope of variables,symbolic constant concept
6		Type casting,operators: Arithematic,Relational,logical
7		Assignment,increment and decrement operator,conditional
8		Bitwise,special,expression and evaluation,statement concept
9		if statement.if..else statement,Nesing of if..else… statement
10		else...if ladder.switch? Operators,loops-while,Do-while
11		For,jumps in loops,labelled loops concept
12	II	Defining a class,how to add variables and method.
13		creating objects,accessing class members,constructors and its types
14		concept of method overlaoding,practical of method overlaoding
15		static members,nesting of methods
16		concept of inheritance,types of inheritance
17		Extending a class, concept of method overriding
18		concept of Final variables,classes,methods & its practical
19		how to implement concept of finalize methods
20		Abstract method and classes,visibility control
21		practical on how to create object and classes
22		practical on inheritance concept
23	III	Arrays: one dimensional and two dimensional array
24		String: methods and classes,vector,wrapper classes
25		defining interface: extending interface,implementing interface
26		accessing interface variable,practical on concept of interface.
27		concept of system packages,using system package
28		concept of adding a class to a package
29		concept of hiding a class to a package
30		practial on how to use one dimensional and two dimensional array
31		practical on how to create package and how to add class on it
32	IV	Creating Threads,extending the Thread class
33		stopping and blocking a Thread
34		life cycle of Thread class
35		how to use Thread classes and methods
36		Thread exception concept.
37		Thread priority concept
38		concept of synchronization of Thread
39		concept of implementing the Runnable Interface

40		practical on how to set Thread priorities
41	V	local and remote applet vs applications
42		Writing Applets,Applet Life cycle,creating and executable Applet
43		Designing a web page,Applet Tag,adding Applet to HTMLfile.
44		Running the Applet,passing parameters to Applet,aligning the display.
45		Html tags & Applet,geeting input from the user

Mahar

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - B. C.A V (July 2019 -Dec 2019)

Subject - Programming with Java Practical

Teacher - Harshita sharma

Day/Lecture	Topic
1	Write a simple java program to print hello
2	Write a program to print factorial of a number
3	Write a program to print fibonacci series
4	Write a program to find greatest of n numbers
5	Write a program to find whether a given number is even or odd
6	Write a program to find largest of three numbers
7	Write a program to check number is palindrome or not
8	Write a program to reverse a string
9	Write a program to convert string into upper and lower case
10	Write a program to swap two numbers without using a third variable
11	Write a program for string concatenation
12	Write a program to find longest word in a string
13	Write a java program to demonstrate the implementation of abstract class.
14	Write a java program to implement single level inheritance
15	Write a java program to implement method overriding
16	Write a java program to implement multiple inheritance.
17	Write a java program to implement method overloading through Interface
18	Write a java program to designed a class that demonstrates the use of constructor and destructor.
19	Write a java program to print largest among two numbers
20	Write a java program to print date and time
21	Write a java program to take input from user using scanner class
22	Write a java program to check given number is a leap year or not
23	Write a java program to print multiplication table using thread
24	Write a java program to print hello world using simple Runnable in Thread
25	Write a java program to implement thread life cycle.
26	Write a java program to implement multithreading.
27	Write a java program to open a file and display the contents in the console window.
28	Write a java program to copy the contents from one file to other file.
29	Write a java program to read the student data from user and store it in the file.
30	Write a java program to print missing number in an array
31	Write a java program to merge two Array
32	Write a java program for multiplying two matrices and print the product for the same.
33	Write a java program to add two matrices and print the resultant matrix.
34	Write a java program to sort 2-D Array
35	Write a java program to transpose matrix using one Array
36	Write a Applet program to display calculator
37	Write a Applet program to print different geomatric shapes
38	Write a Applet program to draw face
39	Write a Applet program to show clock timing
40	Write a Applet program to change Applet backgroun color using scrollbar

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Department of Computer Science

Lesson Plan - BCA Vth Sem (July 2019 - Dec2019)

Subject - Computer Organization and Architecture

Teacher - Shwetanjali Vijayvargiya

Day/Lecture	Unit	Topic
1	1	Introduction to organization and architecture
2		structure and function of System.
3		history of Computers with digrams
4		Explain computer components
5		Explain computer function
6		Pentium and power evolution for performance
7		Explain interconnection structure
8		Explain bus interconnection and PCI.
9		Future bus concept.
10		Revision of 1st unit.
11	2	Explain Computer Memory System
12		Explain primary memory with types
13		Secondary memory with types
		Continue Secondary memory.
14		cache memory with types.
15		Explain Advance DRAM organization
16		RAID Optical memory
17		Revision of 2nd unit.
18		Class test of 1st and 2nd memory.
19	3	Machine Instruction Characteristics
20		Types of Operand and Type of Operations
21		Assembly Language
22		Addressing mode and Instruction formats
23		Explain Instruction Cycle
24		Instruction Pipelining.
25		Pentium Processor and Power PC Processor.
26		Revision of 3rd unit
27	4	Micro Operations and control of the CPU
28		Hardwired implementation
29		Explain Concepts of Micro programmed control
30		microinstruction sequencing and microinstruction execution
31		applications of micro programming
32		Revision of 4th unit
33		External Devices, I/O modules
34		Programmed I/O and Interrupt-Driven I/Owith flowchart

35		Direct Memory Access
36		I/O Channels and processors
37	5	External Interface and parallel processor
38		The MESI Protocol vector computation
39		Revision..
40		Revision
41		Class test.

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Department of Computer Science

Lesson Plan - BCA V (July 2019 - Dec 2019)

Subject - Software Engineering

Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Unit	Topic
1	I	Data, Information and system, types of system, its characteristics and components
2	I	Business system and its types, Environment
3	I	Introduction of software engineering: definition and application
4	I	System Analysis and its different phases
5	I	system requirement, SDLC and phases of SDLC
6	I	Continue phases of SDLC
7	II	Project Selection: Sources of Project request(deprtmental managers, senior executives, system analyst and outside group)
8	II	Managaing Project reivew and slection: different committee methods
9	II	recognition of need (preliminary investigation) and its methods
10	II	Fact Finding Techniques(Study of existing documents, PI, Questionniares, JAD, RAD, Onsight observation and researh on website)
11	II	Fesibility Anlaysis: Types of feasibility study
12	II	Economic Analysis: different types of Costs and Benefits occurred during project development
13	II	Cost and Benefit determination, steps of determining cost nad benefit analysis
14	III	Introduction of Structured system analysis and its goals
15	III	SDLC with structured system analysis: Explosion of Process into sub processes
16	III	Tools of structured system analysis: DFD, its different sysmbols and rules of constructing DFD
17	III	Software design fundamentals: general defintion of design, its goal and software desing model
18	III	Arhcitectural, Procedural and software design fundamentals, software architecture
19	III	continue tools of SSA: Data dictionary, its formats and elements, Structured English
20	III	continue tools of SSA: Decision Tree and Decision table, its types
21	III	Object oriented design models: Object, Dynamic and Fucntional Model(DFD, Use-Case, Class. Object, Sequence, Collaboration, State, Activity, Component and Deployment)
22	IV	Data flow Oriented Desing
23	IV	Introduction of software quality assurance, Quality factor specification
24	IV	Software requirement, software desing, software testing and implementation
25	IV	Levels of quatliy assurance: Testing, Validation and Certification
26	IV	Software Testing fundamentals: Tetability, Operability, Observability, Controlabilit, Decomposability, simplicity, Stabiltiy and understandibility
27	IV	Characterics of Test: High probalility, Strategic approach to software tesing
28	IV	Validation and Verification, Conventional software architecture of testing

29	IV	Strategic Issues, Criteria for completion of testing
30	IV	Methods of Testing: While box, Black box, Gray box, Visual
31	IV	Levels of Testing: Unit, Integration and System
32	IV	Objectives of Testing: Regression, Acceptance, Alpha and Beta
33	V	System Implentation: Definition and its types, Conversion, Steps of conversion and Activity network of conversion
34	V	File conversion, Test files, data entry, audit control and user training
35	V	Post implementation review, review plan
36	V	Software Maintenance: Defintion, its types, activities of maintenance
37	V	Methods of reducing Maintenance cost: Maintenace Management audit, Software system audit and software modification
38	V	Hardware and software selection process
39	V	Major Phases of Hardware Selection: Requirement analysis, System Specification, RFP, Evlauation and Validation, Vendor Selection and Post Installation review
40	V	Major Phases of Software Selection: Reliability,Fucntionality, Capacity, Flexibility, Usability Security , Performance, Servicability, Owership and Minimal cost

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Department of Computer Science

Lesson Plan - B.C.A. V SEM (July 2019 -Dec2019)

Subject - WEB DESIGNING AND WEB TECHNOLOGY

Teacher - Prof. Shailesh Hirve

Day	Unit	Topic
1	I	Client sever Computing Concepts
2		Distributed computing on the Internet
3		Introduction to Web Pages, HTML, HTML Elements and pages
4		Formatting text and pages
5		Including picture and links in a page
6		Creating tables and lists
7		Splitting pages into frames
8	II	Site Design and Navigation
9		The home page Navigational tools
10		Formatting the body section using block level
11		Formatting using text level & using phrase
12		Formatting using font style
13	III	Multimedia with Web :- Creating files, streaming audio, streaming animations
14		Java Script and Browser
15		Java Script and sever
16		Embedding Java Script & HTML
17		Java Script fundamentals:-Variables, Value Store house
18		Java Script statements, loops, condition and functions
19		Java Script objects properties and methods
20		Event handlers and non script tag
21	IV	Comparison of HTML, DHTML and XML
22		Web casting, Domain name selection
23		Web sever selection, Web hosting, uploading and downloading of web
24		Incremental uploading of data, introduction to SQL Sever

25		Introduction to user management in SQL – Server
26	V	Introduction to ASP, database handling with ASP
27		Connection object
28		Record set object
29		Request object
30		Response object
31		Cookies, creating tables and insert query through connection

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Department of Computer Science

Lesson Plan -BCA V Sem (July 2019 - Dec 2019)

Subject - Practical VB/VB.NET

Teacher - Prof Meenakshi Vyas

Day/Lecture	Topic
1	Intro To VB,Need & History
2	Types of VB Packages
3	Starting VB Editor ,Screen Description-Options Available
4	Crwating And Saving a Project
5	Different Tools availble & Properties
6	Different Tools availble & Properties
7	Different Tools availble & Properties
8	Form Layout ,Different Between Tool Box & Tool Bar
9	Sample Programs
10	Addition Program
11	Msg Box And different types of messages
12	Create a window application for simple calculator
13	create a window application to compare b/w two no, compare b/w 3 no.
14	create a program with a text box and one button control to check whether a number is prime or not
15	create a program with a tex box and one button control to check the no is even or odd.
16	create a program and one button control check the year is leap year or
17	create a windows application to calulate simple interst.
18	create a windows application tocalculate factorial of a number.
19	create a windows application to calculate for storing and displaying 10 number in an array.
20	create a windows application to calulate to generate fibonacci series.
21	create a windows application to calculate for swapping two numbers.
22	create a windows application to calculate sum and average of 10 numbers stored in array.
23	create aprogram to determine whether a given angle forms a valid triangle.
24	create a program which allow user to select gender using checkbox control.
25	create a program to change the case of text box according to selected radio button.
26	create a program to determine input number is prime or not .
27	create a windows application that contains a list box and a button. The click event of.
28	the button inserts odd nos between 1 to 100 in the list box
29	create a program with a text box and two button control to set the button to oupen file. And to save a file
30	create a windows application that countains text boxes and a button . The click event of the button displays the
31	percentage of student on the basis of marks entred in the text boxes.

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Department of Computer Science

Lesson Plan - B.C.A VI Sem(Jan 2020 - June 2020)

Subject - Computer graphics and multimedia

Teacher - Meenakshi vyas

Day/Lecture	Unit	Topic
1	1	What is Computer Graphics
2		Pixel,frame,buffer
3		application of computer graphics
4		Raster graphics fundamentals
5		Display devices random scan
6		Color CRT monitor
7		DUST and plasma panel
8	2	Algorithms for line generation
9		mid point circle generation
10		Bresenhams Circle algorithm
11		polygon generation algorithm
12		polygon generation algorithm
13		polygon filling
14		Anti aliasing
15		2D transformation: Translation
16		Scaling,Rotation,Reflection
17		homogeneous coordinates
18	3	3-D transformation: translation
19		Scaling,Rotation,Reflection
20		windowing & clipping windows
21		windowing & clipping windows
22		view port ,line clipping
23		polygon clipping
24		polygon clipping
25		segment table , segment creation-deletion-rename
26		segment table , segment creation-deletion-rename
27	4	Multimedia: Text - font faces
28		animating text ,hyper text
29		sound: MIDI
30		digital audio basics
31		auto file formats
32		audio editing
33		MCI- multimedia
34		control interface
35		image- bitmap
36		vector drawing
37		color palate
38		concept of 3D modeling
39		image file formats (BMP, JPG)
40		animation: principle of animation
41		cell animation

42		kinematics
43		morphing
44	5	video- broadcast video standards (NTSC, PAL)
45		integrating computer and television
46		video capture board
47		shooting and editing video
48		recording formats 9S - VHS (video hardware resolution)
49		video compression (JPEG, MPEG)
50		hard copy devices: printers & plotters
51		input devices: mouse,trackball
52		light pen ,scanner
53		digital camera

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Department of Computer Science

Lesson Plan - BCAVI Sem(Jan 2020 - June 2020)

Subject - Computer Graphics Practical

Teacher - Prof Meenakshi Vyas

Day/Lecture	Topic
1	Develop DDA Line drawing algorithm & its program.
2	Develop Bresenhams circle drawing algorithm with program
3	Write Polygon generation algorithm.
4	Wap to generate polygon
5	Write polygon filling algorithm.
6	Wap to fill any polygon
7	Wap to translate a 2D object.
8	Wap to Scale a 2D object.
9	Wap to Rotate a 2D object.
10	Wap to Reflection a 2D object.
11	Wap to translate a 3D object.
12	Wap to Scale a 3D object.
13	Wap to Rotate a 3D object.
14	Wap to design front page of any report using graphics techniques
15	Wap to draw and object and animate it using transformations

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Department of Computer Science

Lesson Plan - BCA VI (Jan 2020- June 2020)

Subject - Computer Oriented Numeriacal Methods

Teacher - Shwetanjali Vijayvargiya

Day/Lecture	Unit	Topic
1	1	Explain Floating Point Number Operations.
2		Explain Normalization and their consequences.
3		Solve problems using Bisection Methods.
4		Solve problems using False Position Methods
5		Solve problems using Secant Method
6		Solve problems using Newton Raphson Method
7		continue Newton Raphson method with more problems
8		Solve problems using Graffes Root Squaring Method
9		Convergence of Solution
10		programs of different methods
11		Revision.
12	2	Solution of Simultaneous Liner Equation Using Gauss Elimination Method.
13		Solution of Simultaneous Liner Equation Using Gauss Seidal Method
14		Solution of Simultaneous Liner Equation Using Gauss Jordan Elimination Method
15		Solution of Simultaneous Liner Equation Using Jacobi Method
16		Solution of Simultaneous Liner Equation Using Triangularization Method
17		Explain III Conditioned Equation and Pivoting Condensation using problems.
18		Least Curve Fitting method using problems
19		Continue Least Curve Fitting with more problems.
20		Non Linear Curve Fitting using Problems.
21		Revision of 1st and 2nd unit.
22	3	Definition Of Forward, Backward,Shifting Operators.
23		Definition of Divided Difference Central and Averaging Operators and Relationships b/w Operators.
24		Newton's Forward Interpolation Formula and solve problem using forward method.
25		Newton's backward Interpolation Formula and solve problem using backward method.
26		Newton's divided Interpolation Formula and solve problem using divided Interpolation method.
27		Lagrange's Interpolation Formula and solve problem using Lagrange's Interpolation method.
28		Continue Langrange's problem.
29		Revision of 3rd Unit
30		Class test of Three units.
31	4	Numerical Differentiation using Newton's Forward Interpolation Formula and solve problem using method
32		Numerical Differentiation using Newton's Backward Interpolation Formula and solve problem using method
33		Numerical Differentiation using Newton's divided Interpolation Formula and solve problem using method.
34		Solve Numerical Integration problem using Newton- Cote's Formula
35		Solve Numerical Integration problem using Trapezoidal Rule and Simpson's one Third Rule
36		Solve Numerical Integration problem using Simpson's Three Eight Rule.
37		Programs of different methods.
38		Revision of 4th unit.
39	5	Numerical Solutions of Ordinary Differential Equations using Euler's Method.
40		Numerical Solutions of Ordinary Differential Equations using Euler's Modifies Method.
41		Solve Problem using Tailor's Series Method.
42		Solve Problem using Picard's Method.
43		Solve Problem using Runga Kutta Second Order and Fourth order Method.
44		Revision
45		Programs of different methods.

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Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA VI (Jan 2020 - June 2020)

Subject - Computer Oriented Numeriacal Methods(practical)

Teacher - Shwetanjali Vijayvargiya

Day/Lecture	Topic
	Write a program to convert floating point number into normalized floating point number.
	Write a program to add two floating point number and convert into normalized floatingpoint number
	Write a program to solve real root of the equation using Bisection Method.
	Write a program to solve real root of the equation using Secants Method.
	Write a program to solve real root of the equation using Regular Falsi Position Method.
	Write a program to solve real root of the equation using Newton Raphson's Method.
	Write a program to solve simultaneous liner equation using Gauss Elimination Method
	Write a program to solve simultaneous liner equation using.Gauss Jordon's Method.
	Write a program to solve simultaneous liner equation using Jacobi's Method.
	Write a program to solve simultaneous liner equation using Gauss Seidal Method.
	Write a program for Newton's Forward Difference Formula.
	Write a program for Newton's Backward Difference Formula.
	Write a program for Newton's Divided Difference Formula.
	Write a program for Lagrange's Interpolation Formula.
	Write a program for evaluation of integral by Trapezoidal's Rule
	Write a program for evaluation of integral by Simpson's 1/3 Rule
	Write a program for evaluation of integral by Simpson's 3/8 Rule
	Write a program for Euler's Method.
	Write a program for Runga Kutta Second Order Method.
	Write a program for Runga Kutta Fourth Order Method

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Department of Computer Science

Lesson Plan - BCA VI (Jan 2020 - June 2020)

Subject - MicroProcessor

Teacher - Prof. Pradeep Purey

Day	Unit	Topic
1	I	Architecture of 8085
2		Architecture of 8085
3		Programming of 8085
4		Programming of 8085
5		, Organization of CPU
6		Various Addressing modes.
7		Organization of registor
8		Various Addressing modes.
9	II	Assembly Language Programming I
10		Assembly Language Programming II
11		Assembly Language Programming
12		, Instruction and data flow
13		, Instruction and data flow
14		Instruction set of 8085.
15		Instruction set of 8085.
16	III	Memory interfacing
17		various Schemes, Address
18		space partitioning
19		various Schemes, Address
20		space partitioning
21		interfacing Technique with various I/O Devices
22		interfacing Technique with various I/O Devices
23		latches
24		Tristate Buffer.
25	IV	Programmable Peripheral 8155 &
26		8255,
27		Programmable Peripheral 8155 &
28		8255,
29		their features, programming and applications
30		their features, programming and applications
31	V	keyboard controller 8279.
32		Architecture of 8051 micro-controller,
33		Architecture of 8051 micro-controller Continue
34		Comparison of microprocessor of different series

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department of Computer Science

Lesson Plan - BCA VI (Jan 2020 - June 2020)

Subject - MicroProcessor Practcial

Teacher - Prof. Pradeep Purey

Day	Topic
1	To load 7bH in register B, transfer the data to register A and increment it by 2
2	To load 23H in register B and 39H in register C. Substract contents of B from C and there in register D
3	To add the contents of register B with register C, store the result of memory location 20C0H
4	Add contents of memory location 20C0H and 20C2H store the result in register B
5	Add the contents of memory location 20C0H with memory location 20C1 H and store the result in 20C2 H
6	Add the contents of memory location 20C0H and 20C1 H and store the result of memory location 2002H and carry memory location 20C3 H contents of 20C0H is 02 H contents of 20C1 H is 03 H
7	Substract the contents of memory location @0C0 H from 20C1 H and store result in register contents of 20C0H is 12H contents of 20C1 H is 13 H
8	Substract the contents of memory location 20C0 H from 20C1 H and store the difference in 20C2 H and borrow at20C3 H
9	Take 2's complement of 29 H and store result in register B
10	Exchange content of register B with C

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Department of Mathematics

Lesson Plan - BCA I sem (July 2019 - Dec2019)

Subject - Mathematics Paper-Mathematics I

Teacher - Prof. Manoj Joshi & Prof. Shifa Goyal

Day/Lecture	Unit	Topic
1	1	Review of function of one variable,limit
2	1	Examples to find limit
3	1	Properties of limit, examples
4	1	Countinuity, Types of countinuity
5	1	Examples
6	1	Differtiability
7	1	Problems
8	1	Problems
9	2	Succcessive Differentiation
10	2	Succcessive Differentiation
11	2	Leibnitz's Theorem
12	2	Examples
13	2	Rolle's Theorem
14	2	Example
15	2	Lagrange's Mean value theorem
16	2	Cauchy's Mean value theorem, example
17	2	Maclaurin's theorem
18	2	Taylor's theorem, examples
19	2	Indeterminant form
20	2	Indeterminant form
21	3	Tangents and Normals
22	3	Examples
23	3	Curvature
24	3	Curvature
25	3	Asymptotes
26	3	Asymptotes
27	3	Asymptotes
28	3	Integration of hyperbolic function
29	3	Reduction formula
30	3	Reduction formula
31	3	Examples

32	4	Differtiation of Vector functions
33	4	Gradient, Divergence and Curl
34	4	Gradient, Divergence and Curl
35	4	Direction derivatives, Partial derivatives of Vector functions
36	4	Direction derivatives, Partial derivatives of Vector functions
37	4	Gradient, Divergence,Curl Of polar coordinate
38	4	Examples
39	4	Examples
40	5	Matrix , Types of matrix
41	5	Opretion and tranformation of matrix
42	5	Opretion and tranformation of matrix
43	5	Inverse of matrix
44	5	Inverse of matrix
45	5	Normal form of matrix
46	5	Rank and nullity of matrix
47	5	Rank and nullity of matrix
48	5	Solution of linear simultaneous equations
49	5	Solution of linear simultaneous equations
50	5	Solution of linear simultaneous equations

Maharaja Ranjit Singh College of Professional Sciences, Indore

Department of Mathematics

Lesson Plan - BCAII sem (Jan 2020- May 2020)

Subject - Mathematics Paper-MathematicsII

Teacher - Prof. Shifa Goyal

Day/Lecture	Unit	Topic
1	1	Concavity,convexity and point of inflexion
2	1	Tracing of cartesian curves
3	1	Tracing of cartesian curves
4	1	Tracing of polar curves
5	1	Tracing of polar curves
6	1	Tracing of parametric curves
7	1	Improper integrals
8	1	Tests for convergence of Improper integrals
9	1	Tests for convergence of Improper integrals
10	1	Evaluation of convergent integrals
11	2	Beta and Gamma functions
12	2	Properties of Beta and Gamma functions
13	2	Duplication formula
14	2	Rectification
15	2	Rectification
16	2	Rectification
17	2	Intrinsic equation
18	2	Intrinsic equation
19	3	Multiple integrals
20	3	Multiple integrals
21	3	Multiple integrals
22	3	Dirichlet Integral
23	3	Area and volume using multiple integral
24	3	Area and volume using multiple integral
25	3	Line integral
26	3	Line integral
27	3	surface and Volume integral
28	3	surface and Volume integral
29	3	Gauss theorem
30	3	Stoke's theorem
31	4	limit and continuity of function of several variables
32	4	limit and continuity of function of several variables
33	4	Differentiability of several variables
34	4	Partial derivatives
35	4	Euler's theorem

36	4	Euler's theorem
37	4	Mean value theorem
38	4	Taylor's theorem
39	5	Maxima and minima of functions of two & three variables
40	5	Maxima and minima of functions of two & three variables
41	5	Maxima and minima of functions of two& three variables
42	5	Convergence and divergence of series
43	5	Tests for convergence
44	5	Tests for convergence
45	5	Tests for convergence
46	5	Tests for convergence

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Department of Mathematics

Lesson Plan - BCAIII sem (July 2019 - Dec2019)

Subject -Mathematics Paper-MathematicsIII

Teacher - Prof. Manoj Joshi & Prof. Shifa Goyal

Day/Lecture	Unit	Topic
1	1	Statements
2	1	Logical connectives
3	1	Logical connectives
4	1	Tautology and contradiction
5	1	Logical Equivalence
6	1	Problems
7	1	Quntifiers
8	1	Boolean Algebra
9	1	Succcessive Differentiation
10	1	Succcessive Differentiation
11	1	Properties
12	1	Examples
13	2	Sets
14	2	Set operations
15	2	Examples
16	2	Examples
17	2	Introduction to method of proof
18	2	Introduction to method of proof
19	2	Mathematical induction
20	2	Examples
21	2	Examples
22	3	Combinatories, Basics of counting
23	3	Counting principles
24	3	Permutations
25	3	Examples
26	3	Examples
27	3	Circular permutations
28	3	Cobinations
29	3	Combinations different types, examples
30	4	Recurrence relations
31	3	Solving recurrence relations
32	3	Examples
33	3	Examples
34	4	Relation definition and examples
35	4	Properties of relations
36	4	Unary, Binary, Ternary, n-ary relations
37	4	Types of binary relations
38	4	Eqivalence relations
39	4	Eqivalence relations, examples

40	4	Equivalence classes
41	4	Comoposite relation Closure of relations
42	5	Graph, definition and examples
43	5	Types of Graph
44	5	Hamiltonian path circuits
45	5	Theorems
46	5	Theorems on the Graph
47	5	Tree and properties
48	5	Theorems on tree
49	5	Languages and Grammars
50	5	Languages and Grammars

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Department of Mathematics

Lesson Plan - BCA V sem (July 2019 - Dec2019)

Subject - Mathematics Paper-Disc maths & Linear Alg

Teacher - Prof. Manoj Joshi & Prof. Shifa Goyal

Day/Lecture	Unit	Topic
1	1	Algebra of Logic,Propositions
2	1	Logical Connectives
3	1	Truth functions, Truth values , Truth tables
4	1	Tautology, Contradiction and Logical equivalence
5	1	Quantifiers, examples
6	1	Algebra of Propositions
7	1	Boolean Algebra, examples
8	1	Properties of Boolean Algebra
9	1	Succcessive Differentiation
10	1	Succcessive Differentiation
11	1	Algebra of Electric Circuit
12	1	Algebra of Electric Circuit
13	2	Boolean functions, Minimal boolean functions
14	2	Bool's theorem, examples
15	2	Disjunctive normal form, examples
16	2	Examples
17	2	Conjunctive normal form, examples
18	2	Theorems
19	2	Examples
20	3	Basics of number system
21	3	Set, examples Subset
22	3	Operation on sets
23	3	Examples
24	3	Function, examples
25	3	Types of functioons
26	3	Theorems
27	3	Binary operation on the set Groupiod, Semi group, Moniod
28	3	Group,Examples
29	3	Properties of Group
30	3	Sub Group, Theorems
31	3	Coset, Theorems
32	3	Normal sub group, Theorems
33	3	Lagranges Theorem
34	3	Basics Ring and Field
35	4	Vector space,examples

36	4	Vector sub space,Thorems
37	4	Quotient space LI, LD vectors
38	4	Linear Maps
39	4	Linear Maps
40	5	Matrix representation of linear maps
41	5	Rank and nullity iof linear maps
42	5	Fundamental theorem
43	5	Eigen values and Eigen vectors
44	5	Examples and theorems
45	5	Examples
46	5	Cayley-Hamilton theorem

Maharaja Ranjit Singh College of Professional Sciences,Indore

Department : Languages

Lesson-Plan BCA I SEM , July 2019- December 2019

Subject - English Language

Teacher - Prof.Shweta Patidar

Day/Lecture	Unit	Topic
1		Amalkanti : Nirendranath Chakrabati
2	1	Question Answer
3		Sita: Toru Dutt
4		Question Answer
5		Delhi in 1857 : Mirza Ghalib
6		Question Answer
7		Prefce to Mahabharat : C. Rajagopalachari
8		Question Answer
9		Spiritual Nationalism of Shri Aurobindo : Nibir K. Ghosh
10		Question Answer
11		The Heritage of Indian Culture : Kapila Vatsyatan
12		Question Answer
13	2	Reading Comprehension and Vocabulary
14		Reading Comprehension and Vocabulary
15		Reading Comprehension and Vocabulary
16		Reading Comprehension and Vocabulary
17	3	Paragraph Writing
18		Paragraph Writing
19		Paragraph Writing
20		Paragraph Writing
21	4	Letter Writing (Formal and Informal letters)
22		Letter Writing (Formal and Informal letters)
23		Letter Writing (Formal and Informal letters)
24		letter Writing (Formal and Informal letters)
25	5	Grammar
26		Grammar
27		Grammar
28		Grammar

Maharaja Ranjit Singh College of Professional Sciences

Department of Biosciences

Lesson Plan - BCA IV Sem (Jan 2019 -June 2019)

Environmental Awareness

Teacher - Dr. Monica Jain

Day/Lecture	Unit	Topic
1	1	Introduction to Environment & Ecology - its definition & Importance
2		Public Participation & Public Awareness
3		Ecology - Introduction
4		Ecosystem - Concepts, Components, Structure & Function
5		Energy Flow, Food Chain, Food Web,
6		Ecological Pyramids & its types
7	2	Air Pollution - Definition, Causes, Effects & its Prevention
8		Water Pollution - Definition, Causes, Effects & its Prevention
9		Noise Pollution - Definition, Causes, Effects & its Prevention
10		Heat & Nuclear Pollution - Definition, Causes, Effects & its Prevention
11		Population Growth & Disparities between Countries
12		Population Explosion
13		Family Welfare Programme
14		Environment & Human Health
15		Cleanliness & Disposal of Domestic Waste
16	3	Water Resources - Problems & Its Conservation
17		Land Resources - Problems & Its Conservation
18		Forest Resources - Problems & Its Conservation
19		Food Resources - Problems & Its Conservation
20		Energy Resources - Problems & Its Conservation
21	4	Introduction to Genetic Species & Ecosystem Diversity
22		Value of Biodiversity - Consumable Use & Productive Use
23		Social, Moral & Asthetic Values of Biodiversity
24		India as Mega-biodiversity Centre
25		Biodiversity at national & local levels
26		Threats to Biodiversity - Loss of habitat
27		Poaching of Wildlife
28		Man & Wildlife conflicts
29	5	Disaster Management - Flood
30		Disaster Management - Earthquake
31		Disaster Management - Cyclones
32		Disaster Management - Landslides
33		Conservation of Laws for Air Pollution
34		Conservation of Laws for Water Pollution
35		Wildlife Conservation Laws
36		Role of IT in protecting environment & health

Maharaja Ranjit Singh College of Professional Sciences, Indore

Department of : Languages

Lesson Plan - B. C.A. II sem (Jan 2020 - March 2020)

Subject - Hindi Language BCA 206

Teacher - Dr.Pushpendra Dubey

Day/Lecture	Unit	Topic
1	1	Hindi Bhasha kaa Udbhav aur Vikas
2	1	Kavita : Bharat Vandana, Surykant Tripathi Nirala
3		Kavita : Swatanrata Pukarti, Jaishankar Prasad
4		Kahani : Bade Ghar Kee Beti, Premchand
5	2	Satire : Ek Gadhe Ki Vapsi, Krishnchandar
6		Satire : Tlephon, Harishankar Parsai
7		Satire : Afsar, Sharad Joshi
8	3	Nibandh : Saundary ki Nadi Narmada, Amritlal Vegad
9		Sansmaran : Bastar men Bagh, Shani
10	4	Dharm : Buddh ki Karuna, Dr.Siddh Tiss
11		Autobiography : Sadagi, Mahatam Gandhi
12	5	Nibandh : Yog ki Shakti, Harivanshray Bacchan
13		Letter : Shikago se Swami Vivekanand Ka Patra
14	Khand 2/ 1	Sampreshan Kaushal : Manak Hindi Bhasha
15		Ashuddhiyaan aur Unka Sanshodhan
16	2	Grammer : Hindi Ka Shbad Bhandar
17		Hindi Ki Vakya Rachna aur Viram Chihn
18	3	Patra Lekhan
19		Saar Lekhan aur Pallavan
20	Khand 3/ 4	Bharat Desh Aur uske Nivasi
21		Bhartiy Samaj Ki Sanrachna
22		Samaji Gatisheelta
23		Dharm Aur Darshan
24	5	Bhartiya Sanskrati ka Vishv Par Prabhav
25		Madhypradesh Ka Sanskratik Vaibhav