Maharaja Ranjit Singh College of Professional Sciences, Indore

Department of Computer Science

Lesson Plan - B. Sc. I Year

Subject - Introduction to Information Technology & Computer Organization

Teacher - Prof. Meenakshi Vyas

Day/Lecture	Unit	Topic
1	1	Introduction of computer:, Block Diagram of Computer
2		types and classification
3		CPU:- function of each unit
4		Types of Memory
5		Types of Memory
6		pen drive, Hard disk and optical disk,Blue ray Disc
7		Mouse,Track ball, Joy stick, Digitizing tablet
8		light pen, Touch screen , mic
9		Scanning: MICR, OCR, OMR,Barcode reader
10		Webcam, Digi camera,PoS,Touch pad,Smart card
11		Printers: Dot matrix, Laser and inkjet printers,Plotters
12	2	software, its types and ,Relation between hardware and software
13		Logical system Architecture showing relationship b/w hardware
14		Function of system software, types
15		language translators
16		Utility programs, Communication software
17		Word processing
18		Speardsheet,Database, Graphics personal assistance
19		Education, Entertainment software
20		Open source Terminologies:Open source software
21		Freeware, Shareware, Proprietary software
22		FLOSS ,GNU, FSF, OSI
23	3	Word processing: Introduction of word processing
24		MS word: Features, Creating,Saving and oprating multi document
25		Editing text:Selecting, Inserting,deleting moving text
26		Previewing documents,printing document
27		Formatting Documents: Paragraph formats
28		Aligning Text and Paragraph,Borders and Shading
29		Headers and Footers
30		Introduction of Excel:worksheet basic,Creating worksheet
31		Data types:dates, alphanumeric values
32		Toolbars and Menus
33		keyboard shortcuts
34		Working with single and multiple workbook coping
35		renaming,moving,adding and deleting
36		Working with formulas & cell referencing
37		Auto sum,coping formulas
38		Powerpoint Presentation: Introduction of powerpoint
39		Slide show, Formatting, Creating a Presentation

40		Inserting Smartart & Hyperlinks
41		Adding Objects,Applying Transition
42		Adding Table,Animation effects
43		Charts & Media files
44	4	Intro to Number system, Decimal,Binary,Octal,Hexadecimal
45		1's & 2's complement
46		Representation of Positive and Negetive numbers:
47		Binary fixed point & Flaoting point Representation
48		Arithmetic operation on Binary numbers
49		Overflow & underflow
50		Character codes
51		Logic gates:AND,OR,NOT & their truth tables
52		NOR, NAND & XOR gates
53		Conversion universal to Basic Gates
54		Counters,Registers,Shift Registers
55	5	Storing data and program in memory
56		Memory Hierarchy in a computer
57		Internal Organization of Semiconductor Main memory chips
58		Semiconductor memory RAM and ROM,Auxiliary Memory
59		Peripheral Devices
60		Magnetic Memories and Hard disk
61		Optical Disks and CD Memories
62		VDU, CRT monitor,LCD Displays
63		Touch screen Displays
64		Print Devices Multiprocessor &Multi core Architecture
65		Flynn Classification:SISD,SIMD, MISD, MIMD

Maharaja Ranjit Singh College of Professional Sciences

Department of Computer Science

Lesson Plan - BSc I yr IT(July 2017 -April2018)

Subject -Practical FOC

Teacher - Prof. Meenakshi Vyas

Day/Lecture	Topic
1	Desktop,start menu,icons,wall paper,screen saver,task bar
2	Control panel
3	Control panel
4	My computer, windows explorer,Accessories
5	Creating and managing folders,
6	Managing files and drives,logging off and shutting down windows
7	Revision
8	Assignment & steps to complete
9	Wordprocessing,MS Word,Screen Description
10	Creating ,Saving and Opening Document
11	Home Ribbon Options
12	Insert ribbon
13	Insert ribbon:Tables and other features
14	Page Layout
15	Page Layout
16	Refernces
17	Mailing Ribbon :Mail-merge
18	Macro
19	Revision
20	Assignment & srteps to complete
21	Excel- Introduction to workbook and worksheet,screen description
22	Saving a work book, editing cells,Entering information in a worksheet-numbers,formula,etc
23	Entering information in a worksheet-numbers,formula,etc.,
24	Using commands and functions,
25	Moving and copying,Inserting and deleting rows and columns
26	Creating charts,pivot charts and Pivot tables
27	page setup : margins adding headers& footers before printing
28	Print Settings
29	Practice sheets
30	Practice sheets

Maharaja Ranjit Singh College of Professional Sciences

Maharaja Ranjit Singh College of Professional Sciences, Indore

Lesson Plan - B. Sc. I (July 2018 -April2019)

Subject - Programming & Problem Solving through C & C++

Teacher - Prof Shetanjali Vijaywargiya

Day/Lecture	Unit	Topic
1	1	Explain about Language,History of C,Basic Structure of C Program.
2		Explain First Program of C.
3		Explain Data type,Keyword,token,Identifier and Printf Scanf Function with Program.
4		Operators and Expressions with Program.
5		Some basic program of C.
6		Loops and Nested loops with Programs.
7		Programs using loop.
8		Different controll statement (if,if..else,break,continue,goto,exit,switch case) with Programs.
9		Explain Function in C. User Define Function with Programs.
10		Programs using Function.
11		Revision of 1st Unit With Practical
12	2	Define Arrays and Types of Array.
13		Arrays programs(matrix Programming).
14		Arrays and Functions, Explain basic of String.
15		Explain different string function with programming.
16		Explain storage classes of C with Example.
17		Give introduction to pointer with example.
18		Explain Pointer and Function ,Pointer and Array.
19		Call by Value and Call by Reference with programs
20		Explain Structure with example.
21		Program using pointer and function.
22		Revision of IInd Unit With Practical.
23		Class test od Ist and 2nd Unit.
24	3	Give Difference b/w Procedure Oriented and Object Oriented programming.
25		Concepts of OOPs.
26		Introduction of C++,Structure of C++ program.
27		Explain Classes and Objects with program.
28		Explain member functin,Inline and friend function with program.
29		Explain Virtual Fuction, private function with program
30		Explain Static Member Fuction and static variable with program.

31		Programs on Objects as Function and Pointers tp members
32		Programs in C++.
33		Revision of 3rd Unit.
34		Revision of 1nd Unit
35		Revision of 2nd Unit.
36	4	Explain Constructors and different types of aconstructors with program..
37		continue with Constructors and Explain destructure with program.
38		Operator overloading (unary and binary) with example.
39		programs for operator overloading.
40		Explain Function Overloading.
41		program for function overloading.
42		Explain Inheritence and types of inheritence.
43		continue with inheritence… and programs of inheritence
44		Explain visibility mode in inheritence with program.
45		Programs of different type of inheritence
46		Explain Virtual Base Classes with example.
47		programs of 4th unit.
48		programs of 4th unit.
49		programs of 4th unit.
50		Revision of 4th Unit.
51	5	Eplaim Polymorphism with example.
52		virtual and pure virtual functions with example.
53		Explain C++ strem Casses.
54		Managing Output with manipulators.
55		File of C++ with programs
56		continue File in C++.
57		Revision of 5th Unit.
58		Revision.
59		Revision.
60		Revision.

Maharaja Ranjit Singh College of Professional Sciences

Maharaja Ranjit Singh College of Professional Sciences, Indore

Lesson Plan - B. Sc. I Year IT (July 2018 - April 2019)

Subject - Programming & Problem Solving through C & C++ (Practical)

Teacher - Shwetanjali Vijayvargiya

Day/Lecture	Topic
1	WAP to print Hello
2	WAP to perform arithmetic operations (Addition, Subtraction,Multiplication, Division) on two numbers.
3	Program to find area and circumference of circle
4	Program to swap of two no's using third variable..
5	Program to swap of two no's without using third variable
6	Program to find greatest of 3 numbers
7	Program to print a table of any number
8	Program to print Fibonacci series up to n
9	Program to reverse a given number
10	Program to find the sum of digit of a given number
11	Program to find factorial of a number
12	Program to check whether a given no is Armstrong or not
13	WAP to generate first N prime numbers
14	WAP to generate first N prime numbers
15	Program to find whether given no is a prime no or not
16	Program to print the different patterns
17	Program using array
18	program of matrix
19	program using Function.
20	program for string Function.
21	Program using Pointer
22	Program using class and object
23	Write a function which accept object as a parameter and returns object
24	Proram for Constructors.
25	Write a program to find the square root using inline function.
26	Write a program to overload + operator to concatenate two string.
27	Write a program to overload ++ operator to increment age of person by one month.
28	Write a program to illustrate the use of friend function.
29	Program for different Inheritence.
30	Program for Virtual function
31	Program for File .

Maharaja Ranjit Singh College of Professional Sciences

Department of Computer Science

Lesson Plan - B. Sc.(IT) II Year (July 2018 - March 2019)

Subject - Operating System Concepts & Computer Network

Teacher - Prof. Shailesh Hirve

Day	Unit	Topic
1	I	Introduction to OS , Functions of OS
2		Types of OS
3		Types of OS
4		System Call, Concepts of Process
5		Process Scheduling Algorithms and examples
6		Process Scheduling Algorithms and examples
7		Process Scheduling Algorithms and examples
8		Process Scheduling Algorithms and examples
9		Introduction to Unix OS, Its Features
10		Unix Commands
11		Unix Commands
12		Unix Commands
13		VI Editor
14		VI Editor Options
15		Introduction of Deadlock, Characteristics of Deadlock
16		Deadlock Prevention
17		Deadlock Avoidance
18		Methods for handling Deadlock
19		Concepts of memory management
20		Context Switch, Logical & Physical Address space
21		Contiguous & Non Contiguous memory allocation
22	II	Paging
23		Segmentation
24		Vertual Memory, Demand Paging
25		Page Replacement Algorithms
26		Page Replacement Algorithms
27		Page Replacement Algorithms
28		Disk Scheduling Algorithms
29		Disk Scheduling Algorithms
30		Internet, Intranet and Extranet
31		Networking, Its advantages and disadvantages

32	III	Network Topologies
33		Different types of Networks
34		Networking devices
35		OSI Refference model
36		TCP/IP Refference model
37		Connection Oriented &Connection Less Services
38		Switching Techniques
39		Switching Techniques
40		Data Link Layer: Error Detection & Correction Techniques
41		Data Link Layer: Error Detection & Correction Techniques
42		Data Link Protocols: Simplex, Stop-and-wait
43		Data Link Protocols: Simplex, Stop-and-wait
44	IV	Sliding Window Protocols:, One bit, Go Back N, Selective Repeat
45		Sliding Window Protocols:, One bit, Go Back N, Selective Repeat
46		Multiple Access Protocols:Aloha, CSMA, CSMA/CD
47		IEEE MAC Protocols: 802.3
48		IEEE MAC Protocols: 802.4
49		IEEE MAC Protocols: 802.5
50	V	Routing Algorithms: Optimal
51		Routing Algorithms: Flooding
52		Routing Algorithms: Distance Vector
53		Routing Algorithms: Link State
54		Internet Protocols
55		Internet Addressing
56		UDP & TCP Protocols
57		Client Server Architecture, DNS, WWW
58		HTTP, Cookies, Proxy Server
59		E-Mail Protocols

Maharaja Ranjit Singh College of Professional Sciences

Department of Computer Science

Lesson Plan - B. Sc.(IT) II Year (July 2018 - March 2019)

Subject - Operating System Concepts & Computer Network Practical

Teacher - Prof. Shailesh Hirve

Day	Topic
1	Commands for files and Directories
2	Commands for files and Directories
3	Commands for files and Directories
4	Commands for files and Directories
5	Commands for files and Directories
6	Commands for files and Directories
7	VI Editor Commands
8	VI Editor Commands
9	VI Editor Commands
10	Process Commands
11	Process Commands
12	Communication Commands
13	Communication Commands
14	Communication Commands

Maharaja Ranjit Singh College of Professional Sciences, Indore
Lesson Plan - B. Sc. II-IT (July 2018 - April 2019)
Subject - Internet Programming using Java
Teacher - Harshita sharma

Day/Lecture	Unit	Topic
1	I	Introduction of static and dynamic webpages&Website.
2		HTML Forms,Scripting languages,HTTP Web server
3		Installation and configuration of application server,web.Xml
4		Internet and www,Introduction to java,javaEnvironment,program structure
5		Java virtual machine,tokens,statements,constants & variables,data types.
6		Type casting,operators:Arithematic,Relational,logical Assignments,Increment and Decrement
7		Conditional ,bitwise,special operator, practical on operators program of java
8		if statements,if..else statements,Nesting of if..else..statementelse…if ladder,practical on operators program of java
9		switch,loops-while,do-while,for loop
10		practical on loops program of java
11	II	Defining a class ,adding variables and Methods,creating objects
12		practical on how to create objects in class
13		Accessing class members, constructor and its types
14		practical on constructor programs
15		method overloading and static member
16		Inheritance concept: Extending a class,overriding methods
17		practical on Inheritance concept its types and overriding methods
18		Concept of final variables,methods,classes,Finalize mathod
19		Abstract methods and classes,visibility control
20		practical on final and abstract methods pograms
21		Array concept: one dimensional & Two dimensional ,strings
22		Defining Interface,Extending interface,Implementing Interfacevariable
23		packages,practical on programs of Interface
24	III	Local and Remote Applet vs Application
25		Writing Applets,Applets life cycle
26		creating and Executable Applet
27		Designing a web page, Applet Tag
28		Adding Applet to HTML file
29		practical on designing of web page using HTMLTag
30		Running the Applet
31		passing parameters to Applets
32		practical on running the Applets
33		Aligning the display
34	IV	Java Servlets,server development process,Deployment Descriptor
35		Generic servlet and life cycle of servlet
36		servlet packages,classes,interfaces
37		practical on how to create servlet programs
38		practical on how to implement servlet methods
39		Methods and Handling forms with servlet
40		various methods of session handling
41		Introduction to Java Database connectivity
42		various steps in process of connection to the database
43		various types of JDBC Driver
44		practical on connnectivity of database
45	V	Introduction to JSP basics:
46		JSP lifecycle, directives,scripting elements
47		standard actions,implicit objects
48		writing JSPS,Expression language (EL)
49		separating buisness logic and presentation logic.
50		connection of jsp with different database viz.oracle,MS-SQL server,My-SQL
51		practical on how to implement scripting language in websites
52		java.sql package,type of statement
53		practical on how to work with database.
54		connection pooling: multiple users and need of connection pooling
55		session handling in jsp .
56		Revision

Maharaja Ranjit Singh College of Professional Sciences, Indore
Lesson Plan - B. Sc. II-IT (July 2018 - April 2019)
Subject - Internet Programming using Java Practical
Teacher - Harshita sharma

Day/Lecture	Topic
1	Write a simple java program to print hello
2	Write a Java program that takes a number as input and prints its multiplication table upto 10.
3	Write a Java program to print the area and perimeter of a circle.
4	Write a Java program to add two binary numbers.
5	Write a Java program to convert a decimal number to binary number and vice versa
6	Write a Java program to reverse a string.
7	Write a Java program to count the letters, spaces, numbers and other characters of an input string.
8	Write a java program to take input from user using scanner class
9	Find the smallest and largest element from the array
10	Write a java program to designed a class that demonstrates the use of constructor and destructor.
11	Write a java program to demonstrate the implementation of abstract class.
12	Write a java program to implement single level inheritance
13	Write a java program to implement method overriding
14	Write a java program to implement multiple inheritance.
15	Create a package, Add the necessary classes and import the package in java class.
16	Write a java program to add two matrices and print the resultant matrix.
17	Write a java program for multiplying two matrices and print the product for the same.
18	Write a java program to print floyd's traingle using loop concept
19	Write a java program to implement thread life cycle.
20	Write a java program to implement multithreading.
21	Write a java program to open a file and display the contents in the console window.
22	Write a java program to copy the contents from one file to other file.
23	Write a java program to read the student data from user and store it in the file.
24	Create a java script program to accept the first, middle, last names of user and print them.
25	Write a java script program to add two numbers.
26	Write a java script program to find the factorial of given number.
27	Write a java Script program to print all prime numbers.
28	Write a program to create database using java database connectivity.
29	Write a program to create,read,update and delete table using database connectivity
30	Write a java program to implement exception handling.
31	Write a program to implement finally block in exception handling.
32	Write a Applet program to display calculator
33	Write a Applet program to print different geomatric shapes
34	Write a Applet program to draw face
35	Write a Applet program to show clock timing
36	Write a Applet program to change Applet backgroun color using scrollbar
37	Write a servlet program that print Hello world
38	Write a servlet that counts and display number of times that has been accessed and saves the count to a file in its destroy method() to make its count persistent
39	Write a servlets that prints the name and value for its init parameters.
40	Write a servlets program that display information about its own server

Maharaja Ranjit Singh College of Professional Sciences, Indore

Department of

Lesson Plan - BSc V Sem

Subject - OOPs using 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		Function and arrays.
26		Function and arrays.

27	3	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

Maharaja Ranjit Singh College of Professional Sciences, Indore

Department of Computer Science

Lesson Plan - BSc VSem

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

Maharaja Ranjit Singh College of Professional Sciences, Indore
Lesson Plan - B.Sc. IT V Sem (July 2018 - Dec 2018)
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	Charactericstics 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	V	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	IV	Major Phases of Hardware Selection: Requirement analysis, System Specification, RFP, Evlauation and Validation, Vendor Selection and Post Installation review
40	IV	Major Phases of Software Selection: Reliability,Fucntionality, Capacity, Flexibility, Usability Security , Performance, Servicability, Owership and Minimal cost

Maharaja Ranjit Singh College of Professional Sciences, Indore
Lesson Plan - B. Sc. IT V (July 2018 - Dec 2018)
Subject - BCIT - I
Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Unit	Topic
1	I	What is computer stands for?, Computer characteristics and applications
2	I	Block diagram of computer and function of each component and
3	I	Classicfication of computer (Purpose, Data Handling and Functionality), its capabilities
4	I	Desktop, Portable: Notebook, Laptop, smart phone
5	I	Smart and dumpTerminal, Client and Server
6	I	What is memory?, types of memory with the help of hierarchical diagram
7	I	Primary Memory: (RAM: SRAM and DRAM) and (ROM: PROM, EPROM, EEPROM) and Cache memory
8	II	Input devices and its functions (Keyboard, Mouse, Scanner, Joystick and Touch Screen, MICR, Barcode reader, Digitializing tablet, VRS)
9	II	Output Devices and its fucntions(Monitor: VGA, SVGA, XGA its types, characteristics)
10	II	Printer and its types (Impact: Dotmatrix, Daisy wheel and Non-Impact: Inkjet and Laserjet)
11	II	SMPS, Cards and its types: Display, Video and Graphic and Audio, Nerwork)
12	II	Introduction of Ports(Serial, Parellal and USB)
13	III	Introduction Secondary storage devices with hierarchical diagram
14	III	Sequential access devices: Magnetic Tape and Process to store data in magnetic tape(size and volume of magentic tape)
15	III	Direct Access devices: Magnetic disc (floppy and Hard disk its types) and Optical disc (CD, DVD, CD-RW, WROM)
16	III	Technology used in flash memory and memory cards.
17	III	Disc pack and its fuctional diagram, Zip disc and wichester disc
18	III	Seek time, Letancy time , tansmission time and Total Access time in sequeintial access and direct access devices
19	IV	What is an Operating System? Its logical architecutre and its classification (CLI and GUI)
20	IV	Types of Operating system(Batch, Multitasking, Time sharing, Multiprocessor, Real time and Embeded)
21	IV	Booting process(Cold and Warm), Introduction of DOS and required system files to run DOS.
22	IV	Difference between DOS, Windows and LINUX

23	IV	Internal and External commands of DOS(date, time, cls, copy con, format)
24	IV	Windows Operating System and its features, difference between menu oriented and ribbon oriented windows O.S.
25	IV	Introduction of Windows 7 and 8: its features,
26	IV	Windows 8.1: Touchscreen featuresCutomization of Application software as required
27	IV	Operations on file and folders: move, copy, rename, serach content
28	IV	Control panel and its options, recyble bin, creation of folder and shortcut
29	IV	Introduction of Linux Operatiing system and features
30	IV	File sytem of LINUX O.S., Commands to perform different file operations
31	IV	GUI mode of LINUX operating system: Ubuntu, Fedora and Debian
32	IV	Desktop and available options on Linux Ubuntu GUI mode
33	V	Introcution of Application packages(MS-Office, Tally, Open Office)
34	V	What is PDF stand for?, Introduction of Different PDF readers and its features and platforms
35	V	Adobe Acrobat reader, Nitro and PDF Xchange
36	V	What is word processing?, different word processing softwares
37	V	features of MS-Word processor 2007, ways of creating documents using(Blank, Template)
38	V	Previewing a document before printing, protecting documents
39	V	Different components of word processor(Formatting, Ruler, Status and Ribbon, Quick Access tool bar)
40	V	Paragraph formatting and Table handling features of MS-Word 2007

Maharaja Ranjit Singh College of Professional Sciences, Indore
Lesson Plan - B.Sc. VI Sem IT (Jan 2019- June 2019)
Subject - Java Programming
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

Maharaja Ranjit Singh College of Professional Sciences, Indore
Lesson Plan - B.Sc. VI Sem IT (Jan 2019 - June 2019)
Subject - Java Programming 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 Ranjit Singh College of Professional Sciences, Indore
Lesson Plan - B. Sc. IT VI (Jan 2019 - June 2019)
Subject - BCIT - II
Teacher - Prof. Pravin Kumar Sharma

Day/Lecture	Unit	Topic
1	I	Introduction of MS-Power Point and its features
2	I	Different components of MS-Power Point(Slide, Handouts, Speaker Notes and Outline)
3	I	Different Views of MS-Power Point,
4	I	Different ways to create MS Power-Point Presentation
5	I	Slide Master and Various themes applied on presentation
6	I	Operations performed on a slide(Insert, Delete, Move, Copy)
7	I	Saving presnetation with different file format
8	II	Introduction of Smart Art, insert picture from file/clipart
9	II	Process to convert old style presentation into new style presentation
10	II	Insert table, charts and different oragnizational charts in presentation
11	II	process to create hyperlink to connect different files and presentation with existing presentation
12	II	Slide Sorter, slide transition and Animation effects.
13	II	Setup slide show options, rehearse timing
14	III	How a presentation run continuously?
15	III	Introduction of spreadsheet software and different spreadsheet software for different platfroms
16	III	Features of MS-Excel, Cell, Row and Column Range
17	III	operations on spreadhseet(copy, move , rename, insert and protecting)
18	III	Insert/Delete row and column, Introduction charts and its types
19	III	creation of charts using data references
20	III	Forumula bar and different built-in formulas used in MS-Excel wroksheet
21	III	creation of marksheet and salary sheet using user defined and built-in formulas of MS-Excel
22	III	Sorting, Filter and freeze panes options used in MS-Excel
23	IV	What is Internet, Its advantages and disadvantages, History of Internet(ARPANET),
24	IV	Introduction of Protocol, different types of protocol used on Internet (SMTP, FTP, TCP/IP, HTTP)
25	IV	DNS, URL, WWW, WWW consortium
26	IV	Search Engine and list of different search engine available
27	IV	Applications of Internet
28	IV	What is E-Mail? Process of sending and receiving of E-Mail and its different protocols
29	IV	What is Network? Types of network(LAN.MAN,WAN)
30	IV	Different network topologies (BUS, Ring, Star, Mesh and Hybrid)
31	IV	What is Cloud computing? Introduction of Web office
32	IV	Introduction of mobile computing and different mobile apps
33	V	Email, Internat and Social networking ethics
34	IV	Introduction of virun and antivirus, types of virus(torjan, spam, E-Mail bombing)
35	IV	firewall, different issues during firewall operations
36	IV	What is Online transcation and points to remember when make online transaction.
37	IV	cyber policies and Intellectual Proerty Rights(IPR)
38	IV	Violation of copyright and redressal