**Name of Assistant/Associate Professor:** Mr. Rakesh Juneja

 **Class & Section:-**BCA IInd Semester **Subject:-** C Programming

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**Overview of C: History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables.**Assignment on Data Types** |
| **Week 2**Assignment statement, Symbolic constant, Operators & Expression: Arithmetic, relational, logical, bitwise, unary, assignment, Operators & Expression: shorthand assignment operators, conditional operators and increment and decrement operators. **Discussion Session** |
| **Week 3**Arithmetic expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy, associativity.**Class test on Operators** |
| **Week 4**Decision making & branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement. **Discussion Session** |
| **Week 5**Decision making & looping: For, while, and do-while loop, jumps in loops, break, continue statement, Nested loops.**Discussion Sesssion** |
| **Week 6**Functions: Standard Mathematical functions, Input/output: Unformatted & formatted I/O, function in C.**Assignment on functions** |
| **Week 7**Input functions viz. getch(), getche(), getchar(), gets(),output functions viz., putch(), putchar(), puts(),string manipulation functions. |
| **Week 8**User defined functions: Introduction/Definition, prototype, Local and global variables, passing parameters, recursion.**Class Test on User Defined Functions** |
| **Week 9****Holi break** |
| **Week 10**Array, Definition, types, Arrays initialization, processing an array, passing arrays to functions. |
| **Week 11**Array of Strings,String constant and variables, Declaration and initialization of string, Input/output of string data.**Class Test on String and its operations** |
| **Week 12**Introduction to pointers, Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime.**Class test on pointers** |
| **Week 13**Algorithm development, Flowcharting, Development of efficient program in C**Class test on c programs** |
| **Week 14****Revision and Pre-Semester** |

 **Name of Assistant/Associate Professor**: Mr. Rakesh Juneja

 **Class & Section:-** B.Sc. IInd Semester **Subject:-** Programming in C

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**Basic concepts of programming, techniques of problem solving, algorithm designing and flowcharting.**Assignment on flowchart and algorithms** |
| **Week 2**concept of structured programming-Top-Down design, Development of efficient program.**Discussion Session**  |
| **Week 3**Program correctness; Debugging and testing of programs, Algorithm for searching, sorting(Insertion, Exchange), Merging of Order-List. |
| **Week 4**Overview of C: History of C, Importance of C, Structure of a C Program Elements of C: C character set, identifiers and keywords, Data types: declaration and definition.**Class Test on Data Types and Discussion Session** |
| **Week 5**Operators: Arithmetic, relational, logical, bitwise, unary, assignment and conditional operators and their hierarchy & associativity. |
| **Week 6**input/output statements, Arithmetic Expression, Evaluation of Arithmetic Expression, Type-casting and Conversion. Arrays: One Dimensional, Multidimensional.**Assignment on Array** |
| **Week 7**Decision making & branching: Decision making with if statement, if-else statement, nested if, else-if ladder, switch statement, goto statement.**Discussion Session** |
| **Week 8**Decision making & looping: for, while, and do-while loop; Jumps in loop, break, continue**Class Test on Decision making and looping** |
| **Week 9****Holi break** |
| **Week 10**Functions: Definition, prototype, passing parameters, Recursion**Assignment on Function** |
| **Week 11**Strings: String Constants, Input & Output, String Functions. Structure & Unions.**Class Test**  |
| **Week 12**Pointers: Declaration, operations on pointers, array of pointers, pointers to arrays**Class test on pointers** |
| **Week 13**File Handling: Standard I/O text File, Writing to File, Reading a File.**Class test on c programs** |
| **Week 14****Revision and Discussion Session** |

 **Name of Assistant/Associate Professor:** Mr. Rakesh Juneja

 **Class & Section:-**BCA IInd Semester **Subject:-** C Programming

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**Overview of C: History of C, Importance of C, Elements of C: C character set, identifiers and keywords, Data types, Constants and Variables.**Assignment on Data Types** |
| **Week 2**Assignment statement, Symbolic constant, Operators & Expression: Arithmetic, relational, logical, bitwise, unary, assignment, Operators & Expression: shorthand assignment operators, conditional operators and increment and decrement operators. **Discussion Session** |
| **Week 3**Arithmetic expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy, associativity.**Class test on Operators** |
| **Week 4**Decision making & branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement. **Discussion Session** |
| **Week 5**Decision making & looping: For, while, and do-while loop, jumps in loops, break, continue statement, Nested loops.**Discussion Sesssion** |
| **Week 6**Functions: Standard Mathematical functions, Input/output: Unformatted & formatted I/O, function in C.**Assignment on functions** |
| **Week 7**Input functions viz. getch(), getche(), getchar(), gets(),output functions viz., putch(), putchar(), puts(),string manipulation functions. |
| **Week 8**User defined functions: Introduction/Definition, prototype, Local and global variables, passing parameters, recursion.**Class Test on User Defined Functions** |
| **Week 9****Holi break** |
| **Week 10**Array, Definition, types, Arrays initialization, processing an array, passing arrays to functions |
| **Week 11**Array of Strings,String constant and variables, Declaration and initialization of string, Input/output of string data.**Class Test on String and its operations** |
| **Week 12**Introduction to pointers, Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime.**Class test on pointers** |
| **Week 13**Algorithm development, Flowcharting, Development of efficient program in C**Class test on c programs** |
| **Week 14****Revision and Pre-Semester** |

 **Name of Assistant/Associate Professor:** Mr. Rakesh Juneja

 **Class & Section:-** B.Sc. IInd Semester **Subject:-** Programming in C

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**Basic concepts of programming, techniques of problem solving, algorithm designing and flowcharting.**Assignment on flowchart and algorithms** |
| **Week 2**concept of structured programming-Top-Down design, Development of efficient program.**Discussion Session**  |
| **Week 3**Program correctness; Debugging and testing of programs, Algorithm for searching, sorting(Insertion, Exchange), Merging of Order-List |
| **Week 4**Overview of C: History of C, Importance of C, Structure of a C Program Elements of C: C character set, identifiers and keywords, Data types: declaration and definition.**Class Test on Data Types and Discussion Session** |
| **Week 5**Operators: Arithmetic, relational, logical, bitwise, unary, assignment and conditional operators and their hierarchy & associativity |
| **Week 6**input/output statements, Arithmetic Expression, Evaluation of Arithmetic Expression, Type-casting and Conversion. Arrays: One Dimensional, Multidimensional.**Assignment on Array** |
| **Week 7**Decision making & branching: Decision making with if statement, if-else statement, nested if, else-if ladder, switch statement, goto statement.**Discussion Session** |
| **Week 8**Decision making & looping: for, while, and do-while loop; Jumps in loop, break, continue**Class Test on Decision making and looping** |
| **Week 9****Holi break** |
| **Week 10**Functions: Definition, prototype, passing parameters, Recursion**Assignment on Function** |
| **Week 11**Strings: String Constants, Input & Output, String Functions. Structure & Unions.**Class Test**  |
| **Week 12**Pointers: Declaration, operations on pointers, array of pointers, pointers to arrays**Class test on pointers** |
| **Week 13**File Handling: Standard I/O text File, Writing to File, Reading a File.**Class test on c programs** |
| **Week 14****Revision and Discussion Session** |

 **Name of Assistant/Associate Professor:** Ms. Meenu Gosain

 **Class & Section:-** BCA(I) IInd Sem  **Subject:-**Logical Organization of computer-II

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1** Sequential Logic: Characteristics, Flip-Flops, Clocked RS Assignment on flip flop  |
| **Week 2**D type, JK, T type and Master-Slave flip-flops. Assignment on master slave Test of flip flop  |
| **Week 3**State table, state diagram and state equations. Flip-flop excitation tablesAssignment on excitation table |
| **Week 4**Sequential Circuits: Designing registers – Serial Input Serial Output (SISO), Serial InputParallel Output (SIPO), Parallel Input Serial Output (PISO), Parallel Input Parallel Output(PIPO)**Assignment on Registers** |
| **Week 5**Shift registers,Designing counters – Asynchronous and Synchronous **Assignment on Counters**  |
| **Week 6**Binary Counters, Modulo-N Counters and Up-Down Counters**Test of Counters** |
| **Week 7**Memory & I/O Devices: Memory Parameters, Semiconductor RAM, ROM, **Assignment on memory**  |
| **Week 8**Magnetic storage devices and Optical Storage devices, **Test of storage devices**  |
| **Week 9****HOLI BREAK** |
| **Week 10**Instruction Design & I/O Organization: Machine instruction, Instruction set selection ,Instruction cycle, **Assignment on Instruction types**  |
| **Week 11**Instruction Format and Addressing Modes. I/O Interface, Interrupt structure**Test of addressing modes**  |
| **Week 12**Program-controlled, Interrupt-controlled & DMA transfer, I/O Channels, IOP**Test of IOP**  |
| **Week 13**Flash memory, I/O Devices and their controllers**Test of I/O Devices**  |
| **Week 14****Revision**  |

 **Name of Assistant/Associate Professor:** Ms. Meenu Gosain

 **Class & Section:-**BCA(III) 6th semester **Subject:-**Introduction to .net

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**The Framework of .Net: Building blocks of .Net Platform (the CLR, CTS and CLS),Features of .Net, Deploying the .Net Runtime, Architecture of .Net platform,**Assignment on .Net architecture**  |
| **Week 2**Introduction to namespaces & type distinction. Types & Object in .Net, the evolution of Web development **Presentation on .net Framework**  |
| **Week 3**Class Libraries in .Net, Introduction to Assemblies & Manifest in .Net, Metadata &attributes . Introduction to C#: Characteristics of C#**test of .Net platform** **assignment on assemblies**  |
| **Week 4** Data types: Value types, reference types, default value, constants, variables, scope of variables, boxing and unboxing.**Practical demonstration of Boxing & Unboxing** **Test of C#**  |

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| **Week 5**Operators and expressions: Arithmetic, relational, logical, bitwise, special operators,evolution of expressions, operator precedence & associativityAssignment on c# operators Test of data types  |
| **Week 6**Control constructs in C#: Decision making, loops**Assignment on looping**  |
| **Week 7**Classes & methods: Class, methods, constructors, destructors, |
| **Week 8**Inheritance & polymorphism: visibility control, overridingAssignment on inheritance  |
| **Week 9****HOLI BREAK**  |
| **Week 10**Abstract class & methods, sealed classes & methods, interfaces **Test of Inheritance**  |
| **Week 11**overloading of operators & functions.**Assignment on function overloading** |
| **Week 12**Advanced features of C#: Exception handling & error handling,**Assignment on Exception Handling**  |
| **Week 13**Automatic memory management, Input and output (Directories, Files, and streams).**Assignment on File handling**  |
| **Week 14****Revision**  |

 **Name of Assistant/Associate Professor:** Ms.Meenu Gosain

 **Class & Section:-**B.Com(H) IInd sem. (A)  **Subject:-**Introduction to computer

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**Computer basic concepts: Definition and characteristics of a computer,Advantages of computer, Components of computer, Human-being Vs computer, Difference between Computer and Calculator, Applications of computerAssignment on Introduction of computer  |
| **Week 2**Generations of Computer, Types of computer: Analog, Digital and Hybrid computers, Micro, Mini, Mainframe and Super ComputerInput devices and Output devices, Introduction to Computer memories:Primary storage, Secondary storage. **Assignment on I/O Devices**  |
| **Week 3**Introduction to Software: Software Types, Systems Software, Types of Operating System, Application Software, Introduction to Programming Language: Types of Programming Language, Language Translators.**Test of programming languages** |
| **Week 4**Introduction to MS Word: Features of MS Word, Components of Word document window, Menu Bars , Creating own document-, Formatting text and document, Mail Merge, Creating a Macro, Working with auto shapes, Export and Import File, Finding and replacing text, SpellCheck and Grammar Check, Working within tables-Adding, deleting, modifying rows and columns, Printing documents.**Assignment on MS-Word****Test of Mail Merge**  |
| **Week 5**Introduction to Database Systems: Basic concepts, Components of database, Advantages of database, DBMS, Components of DBMS, Database ModelsAssignment on Database  |
| **Week 6**Microsoft Access: Create a database, Database Objects, Creating tables, Data Types, Sorting, Filtering Creating a relationships, Format a table, **Assignment on Access**  |
| **Week 7**Creating and modifying a Form, Operators in Access, Designing Queries and Reports.**Test of MS- ACCESS**  |
| **Week 8**MS Excel: Features of MS Excel, Components of Worksheet, Menu Bars, Working with worksheets –cells -Entering ,editing, moving, copying, cutting, pasting, Inserting and deleting of cells, rows and columns, **Assignment on Excel functions**  |
| **Week 9****Holi Break** |
| **Week 10**Formatting a worksheet, Formatting textual data,Creating and editing charts, Types of Chart,Excel Functions, Goal Seek, validation,Pivot Table and Pivot Chart, Sort, Filter, Print the worksheet.**Test of MS-EXCEL** |
| **Week 11**Computer Network: Introduction, Network Elements, Advantages of Networking ,Network Topologies, Communication Channels, Types of Computer Networks-LAN,MAN and WAN , Public and Private Network., Communication devices**Assignment on Network****Test of Communication devices**  |
| **Week 12**Internet: Introduction, History of Internet, Benefits of the Internet, Hardware and Software requirement for Internet, Internet Applications or services of Internet, Types of Internet Connection, Internet Addressing**Test of Internet**  |
| **Week 13** Extranet and E-Mail, Mobile Computing.**Revision** |
| **Week 14****Revision** |

 **Name of Assistant/Associate Professor:** Ms. Meenu Gosain

 **Class & Section:-**M.Sc.(Maths) **Subject:-** 17MAT24DA6:Object Oriented Programming with C++

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**Basic concepts of Object-Oriented Programming (OOP). Advantages and applications of OOP. Object -oriented languages**Assignment of applications of OOP**  |
| **Week 2**Introduction to C++. Structure of a C++ program.Creating the source files. Compiling and linking. |
| **Week 3**C++ programming basics: Input/Output, Data types, Operators, Expressions, Control structures , Library functions**Test of object oriented approach**  |
| **Week 4**Functions in C++ : Passing arguments to and returning values from functions ,Inline functions , Default arguments, Function overloading**Practical approach on function overloading**  |
| **Week 5**Classes and objects : Specifying and using class and object,Arrays within a class, Arrays of objects , Object as a function arguments, Friendly functions, Pointers to members.**Assignment on classes**  |
| **Week 6**Constructors and destructors. Operator overloading and type conversions.**Given Programming approach of Constructors & destructors** |
| **Week 7**Inheritance : Derived class and their constructs, Overriding member functions, Class hierarchies, Public and private inheritance levels**Develop a program on Types of Inheritance** |
| **Week 8**Polymorphism, Pointers to objects, This pointer, Pointers to derived classes, Virtual functions.**Assignment on Virtual function** |
| **Week 9****Holi Break** |
| **Week 10**Streams, Stream classes |
| **Week 11**Unformatted Input/Output operations, Formatted console Input/Output operations, Managing output with manipulators.**Test of stream classes** |
| **Week 12**Classes for file stream operations, Opening and Closing a file. File pointers and their manipulationsAssignment of file handling  |
| **Week 13**Random access. Error handling during file operations, Command-line arguments. Exceptional handling.**Test of file handling**  |
| **Week 14****Revision** |

 **Name of Assistant/Associate Professor:** Ms. Meenu Gosain

 **Class & Section:-**BCA(I) **Subject:-** Logical Organization of computer – II

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**Sequential Logic: Characteristics, Flip-Flops, Clocked RS,Assignment on Flip Flops |
| **Week 2**D type, JK, T type and Master-Slave flip-flops.**Test of Flip flop**  |
| **Week 3**State table, state diagram and state equations. Flip-flop excitation tables**Assignment on Excitation Table** |
| **Week 4**Sequential Circuits: Designing registers – Serial Input Serial Output (SISO), Serial Input Parallel Output (SIPO), Parallel Input Serial Output (PISO), Parallel Input Parallel Output (PIPO)**Assignment on Registers** |
| **Week 5**shift registers. Designing counters – Asynchronous and Synchronous**Test of Registers** |
| **Week 6**Binary Counters, Modulo-N Counters and Up-Down Counters**Assignment on counters**  |
| **Week 7**Memory & I/O Devices: Memory Parameters, Semiconductor RAM, ROM**Assignment on memory**  |
| **Week 8**Magnetic and Optical Storage devices, Flash memory,**Assignment on Magnetic storage devices**  |
| **Week 9****Holi break** |
| **Week 10**I/O Devices and their controllers.**Assignment on i/o CONTROLLERS** |
| **Week 11**Instruction Design & I/O Organization: Machine instruction, Instruction set selection,Instruction cycle, Instruction Format**Test of I/O Controllers** |
| **Week 12**Addressing Modes. I/O Interface, Interrupt structure, Program-controlled**Test of Instruction format**  |
| **Week 13**Interrupt-controlled & DMA transfer, I/O Channels, IOP.**Test of addressing modes**  |
| **Week 14****Revision** |

 **Name of Assistant/Associate Professor:** Ms. Meenu Gosian

 **Class & Section:-**BCA(6th )Sem **Subject:-** Introduction to .net

 **Subject Lesson Plan: 18 weeks (from January 2018 to April 2018)**

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| **Week 1**The Framework of .Net: Building blocks of .Net Platform (the CLR, CTS and CLS),Features of .Net,**Assignment on .net**  |
| **Week 2**Deploying the .Net Runtime, Architecture of .Net platform, Introduction to namespaces & type distinction.**PPT on .Net platform** **Test of features of .net**  |
| **Week 3**Types & Object in .Net, the evolution of Web development  |
| **Week 4**Class Libraries in .Net, Introduction to Assemblies & Manifest in .Net, Metadata &attributes . **Assignment on Metadata****Test of Class libraries**  |
| **Week 5**Introduction to C#: Characteristics of C#, Data types: Value types, referencetypes, default value, constants, variables, scope of variables, boxing and unboxing.**Practical approach of Boxing & Unboxing** **Test of datatypes** |
| **Week 6**Operators and expressions: Arithmetic, relational, logical, bitwise, special operators,evolution of expressionsTest of Operators |
| **Week 7**Operator precedence & associativity, Control constructs in C#: Decision making, loops**Assignment on Operators****Test of loops**  |
| **Week 8**Classes & methods: Class, methods, constructors, destructors,overloading of operators & functions.**Assignment of Operator overloading****Test of Operators**  |

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| **Week 9****HOLI BREAK**  |
| **Week 10**Inheritance & polymorphism: visibility control, overriding **Assignment on inheritance**  |
| **Week 11**Abstract class & methods, sealed Classes & methods, interfaces.**Test of Overriding**  |
| **Week 12**Advanced features of C#: Exception handling & error handling**Test of Abstract classes** |
| **Week 13**Automatic memory management, Input and output (Directories, Files, and streams).**Test of file handling**  |
| **Week 14****Revision** |

 **Name of Assistant/Associate Professor:** Ms. Chander Kala

 **Classes and Subjects :-** B.C.A II( Web Designing),B.B.A N 405(DBMS),B.sc III 6.1(Visual Basic),B.Sc II4.2(Operating
 System)

 **Subject Lesson Plan: 14 weeks (from January 2018 to April 2018)**

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| **Week 1:** **BCA II- I**ntroduction to Internet and World Wide Web, Evolution and History of World Wide Web**BBA II** Introduction to data base management system – Data versus information, record, file. **B.Sc II** Operating System Function And Characteristicshistorical evolution of operating systems**B.Sc II**I Introduction to VB: Visual & Non-visual programming, Procedural, Object-oriented and event driven programming languages**Assignments:****BCA II-**Internet and its application **BBA II** Explain Database and DBMS**B.Sc II** What is operating system and explain itsfunction**B.Sc II**I Explain Visual Basic |
| **Week 2** **BCA II-** Web Browsers; Web Servers;Introduction to HTTP**BBA II** data dictionary, database administrator**B.Sc II T**ypes of Operating System: Real time, Multiprogramming, Multiprocessing, Batchprocessing.**B.Sc II**I The VB environment: Menu bar, Toolbar, Project explorer, Toolbox**Test :****BCA II-** Explain different types of browser**BBA II** Explain role of DBA**B.Sc II** Difference between multiprogramming and multiprocessing**B.Sc II**I Explain component of Visual Basic Enviornment |
| **Week 3****BCA II-** Hypertext Transfer Protocol, Overview ofTCP/IP and its services; URLs; Searching and Web-Casting Techniques; Search Engines and Search Tools**BBA II** DBMS Function and responsibilities**B.Sc II** Methodologies for implementation of O/S service**B.Sc II**I Properties window, Form designer, Form layout**Assignments:****BCA II-** Explain TCP/IP and its services**BBA II** DBMS Function and responsibilities**B.Sc II** Operating system function**B.Sc II**I Component of visual basic enviornment |
| **Week 4****BCA II** ; Internet Service Provider**BBA II F**ile-oriented system versus database system.**B.Sc II** system calls, system programs**B.Sc II**I Immediate window. Event driven programming.**Test:****BCA II-** Explain different ISP and explain their services**BBA II** Difference between **F**ile-oriented system and database system**B.Sc II** short note on system call**B.Sc II**I Define event driven programming with detail |
| **Week 5****BCA II-** Web Publishing: Hosting your Site**BBA II** Database system architecture **B.Sc II** Process management: Process concepts, operations on processes, Process states and Process Control**B.Sc II**I Basics of Programming: Variables: Declaration, Types of variables, Converting variables types,**Assignments:****BCA II** What is website.How can we creat website. Explain its publishing and hosting**.****BBA II** ExplainDatabase system architecture with diagram.**B.Sc II** What is process.Explain its different states with diagram.**B.Sc II**I Discuss in class on variables |
| **Week 6****BCA II-** Web terminologies, Phases of Planning and designing your Web Site; Steps for developing your Site**BBA II S**chemas, sub schemas and instances; data base architecture**B.Sc II** CPU Scheduling: Scheduling criteria, Levels of Scheduling,**B.Sc II**I User-defined data types, Scope & lifetime of variables. Constants: Named & intrinsic. Operators**Test:****BCA II-** Short note on web terminology**BBA II** Explaindata base architecture with example.**B.Sc II** What is scheduling .Define different types of scheduling?**B.Sc II**I What is datatype. Define different types of datatypes |
| **Week 7****BCA II-** Choosing the contents; Home Page; Domain Names, Front page views, **BBA II** Data independence, mapping**B.Sc II** Scheduling algorithms, Multiple processor scheduling**B.Sc II**I Arithmetic, Relational & Logical operators. I/O in VB:**Assignments:****BCA II-** Short note on Domain Name System**BBA II** What is Data Independance . Types of data Independence**B.Sc II** Explain Different types of scheduling algorithm**B.Sc II**I What is operator. Define different types of operator |
| **Week 8****BCA II-** Adding pictures, Links,Backgrounds, Relating Front Page to DHTML. Creating a Website and the Markup Languages (HTML, DHTML)**BBA II D**ata models,types of database systems.**B.Sc II** Deadlocks: Deadlock characterization, Deadlock prevention and avoidance.**B.Sc II**I Various controls for I/O in VB, Message box, Input Box, Print statement.**Test:****BCA II**- Short note on HTML and DHTML**BBA II** What is Datamodel. Define different types of data model.**B.Sc II** Short note onDeadlock prevention and avoidance Concurrent Processes: Critical section problem, Semaphores, **B.Sc II**I Explain different types of control in VB, Programming with VB: Decisions and conditions: If statement, If-then-else, Select-case |
| **Week 9****HOLI BREAK** |
| **Week 10****BCA II-** Web Development: Introduction to HTML; Hypertext and HTML HTML Document Features; HTML command Tags; **BBA II F**irewalls and database recovery, Data base security – Threats and security issues**B.Sc II** Inter-process Communications. Storage Management : memory management of single-user and multi -user operating system**B.Sc II**I Looping statements: Do-loops, For-next, While-wend, Exit statement**Test:****BCA II-** Explain differentHTML command Tags**BBA II** Short note on Firewall**.****B.Sc II** What is Memory management. Functions of memory management**B.Sc II**I What do you mean by loop. Define different types of loop |
| **Week 11****BCA II-** Creating Links; Headers; Text styles; Text Structuring in HTML;**BBA II** Techniques of data base security; distributed data base**B.Sc II** Classical process co-ordination problems and their solutions**B.Sc II**I Nested control structures. Arrays: Declaring and using arrays**Assignments:****BCA II-** Define different text styles in HTML.**BBA II** Short note on database security.**B.Sc II** Classical process co-ordination problems and their solutions**B.Sc III**What do you mean by array define different types of array |
| **Week 12****BCA II-** Text colors and Background; Formatting text; Page layouts; Images; Ordered and Unordered lists; Inserting Graphics; Table Creation and Layouts; Frame Creation and Layout**BBA II** Data warehousing and data mining**B.Sc II** Partitioning, swapping, paging, segmentation, Thrashing**B.Sc II**I One-dimensional and multi-dimensional arrays, Static & dynamic arrays,Arrays of array. Programming with VB: Procedures: General & event procedures, Subroutines, Functions, Calling procedures**Test:****BCA II- Difference between ordered list and unordered list****BBA II short note on Datawarehouse and Data mining****B.Sc II Short note on swapping and paging** **B.Sc II**I Difference between function and procedure |
| **Week 13****BCA II-** Working with Forms and Menus; Working with Radio Buttons; Check Boxes; Text Boxes;**BBA II** Emerging data base technologies, internet,database,**B.Sc II** **II** File management: File Systems: Functions of the system, File access methods, allocation methods Contiguous, allocation, linked, indexed allocation**B.Sc II**I Arguments- passing mechanisms, Optional arguments, Named arguments Functions returning custom data types. Working with forms: Adding multiple forms in VB, Hiding & showing forms, Load & unload statements**Assignments:****BCA II- How can we creat menu in HTML. Use all components in HTML.****BBA II Define different database technologies.****B.Sc II Short note on file access methods.****B.Sc II**I How can we creat a form in HTML . Define all the steps to creat multiple forms in HTML. |
| **Week 14****BCA II-** DHTML: Dynamic, Features of DHTML,CSSP(cascading style sheet positioning) and JSSS(JavaScript assisted style sheet), Layers of netscape, The ID attributes, DHTML**BBA II** Digital libraries, multimedia data base mobile data base, spatial data base.**B.Sc II**  Directory Systems: Structured Organizations,directory and file protection mechanisms**B.Sc II**I Activate & deactivate events, Form-load event, menu designing in VB, Database Programming using DAO & ADO, Simple Active X controls.**Test:****BCA II Short note on CSSP and JSSS****BBA II Short note on mobile database and spatial database****B.Sc II Explain file protection mechanism****B.Sc II**I Explain Active X control |

 **Name of Assistant/Associate Professor:** Ms. Priti

 **Lesson Plan: 15 weeks (from January 2018 to April 2018)**

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| **Week 1****BCA IVTH Sem Subject:- Object Oriented Programming Using C++** Object Oriented Programming Concepts :Procedural Language and Object Oriented approach,Characteristics of OOP,user defined types, polymorphism and encapsulation.**B.sc IInd Sem Subject:- Structured Systems Analysis and Design**Introduction to system, Definition and characteristics of a system, Elements of system, Types of system,System development life cycle, Role of system analyst, Analyst/user interface. **B.Com.IVth SEM( Vocational Course)Subject:- Data Base Management System-II**Data, Information, Data Processing, Database Terms,Database Technologies: Introduction, Internet Databases, WebTechnology, Web Databases**B.Com.IVth Sem( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Introduction to ‘C’ Language: Introduction, Programming Rules, Executing the Program,Operators, DecisionStatement, LoopControl Statement; |
| **Week 2****BCA IVTH Sem Subject:- Object Oriented Programming Using C++** Getting started with C++: syntax, data types, variables, string, function, namespace and exception.**B.sc IInd Sem Subject:- Structured Systems Analysis and Design**System planning and initial investigation: Introduction, Bases for planning in system analysis, Sources of project requests, Initial investigation, Fact finding,**B.Com.IVth SEM( Vocational Course) Subject:-** Data Base Management System-IIDigital Libraries, Mobile Databases,Data Independence Concepts,Physical Data Organization: Introduction, Physical Storage Media,**B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Structure Programming:Advantages and disadvantages of Structured Programming. Scanf( ) and Printf( ). |
| **Week 3****BCA IVTH SEM Subject:- Object Oriented Programming Using C++** operators, flow control, recursion, array and pointer, structure**B.sc IInd Sem Subject:- Structured Systems Analysis and Design**Information gathering, information gathering tools, Structured analysis,Tools of structured analysis: DFD,Data dictionary,**B.Com.IVth SEM( Vocational Course) Subject:-** Data Base Management SystemRAID (Redundant Arraysof Independent Disk)Technology, Advantage and Disadvantage of RAID Technology.**B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Pointer: Declaration, Operations on Pointer, Array of Pointers to Arrays.Functions: Definition, Prototype,Passing parameters |
| **Week 4****BCA IVTH Sem Subject:- Object Oriented Programming Using C++** Abstracting Mechanism:classes, private and public, Constructor and Destructor **Assignment on constructor and destructor****B.sc IInd Sem Subject:- Structured Systems Analysis and Design**Flow charts,Gantt charts, decision tree, decision table, structured English, Pros and cons of each tool,**Assignment on flow charts****B.Com.IVth SEM( Vocational Course) Subject:- Data Base Management System**  E.R Model:Basics of E.R Model, Conversion of E.R. Model into Relations**Assignment on ER Model****B.Com.IVth Sem( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Recursion.Data Structures: Array,Overview of Compilers and Interpreters, Program Development in C.**Assignment on compiler** |
| **Week 5****BCA IVTH SEM Subject:- Object Oriented Programming Using C++**Member function, static members, references;Memory Management:new, delete,**B.sc IIND SEM Subject:- Structured Systems Analysis and Design**Feasibility study:Introduction, Objective, Types, Steps in feasibility analysis, Feasibility report, Oral presentation,**B.Com.IVth SEM( Vocational Course) Subject:-** Data Base Management System-IIDecision Support Systems(DSS): History of DSS, Characteristics of DSS, Benefits of DSS,Components of DSS,Operational Data versus DSS Data.**B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**difference between compiler and interpreter, Data handling formatted and unformatted console functions, |
| **Week 6****BCA IVTH SEM Subject:- Object Oriented Programming Using C++**object copying, copy constructer,assignment operator, this input/output**B.sc IIND SEM Subject:- Structured Systems Analysis and Design**Cost and benefit analysis: Identification of costs and benefits,classification of costs and benefits**B.Com.IVth SEM( Vocational Course) Subject:-** Data Base Management System Relationship: One-to-one, One-to-Many, Many-to-Many.Data Warehousing andData Mining: Introduction, Main Components of Data Warehouses,Benefits and Limitations of Data Warehouse,**B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**difference between union and structures, nesting of structures, searching sequential and binary searching by array,**Week 7****BCA IVTH SEM Subject:- Object Oriented Programming Using C++**Inheritance and Polymorphism:Derived Class and Base Class, Different types of Inheritance,**B.sc IIND SEM Subject:- Structured Systems Analysis and Design**Methods of determining costs and benefits, Interpret results of analysis and take final action. System Design: System design objective,**B.Com.IVth SEM( Vocational Course) Subject:-** Data Base Management System Data Mining: Introduction, Data Mining Tools,Data Mining Application, AdvancedDatabase Models,Database Security: **B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**difference between while , dowhile and for loop |
| **Week 8****BCA IVTH SEM Subject:- Object Oriented Programming Using C++**Overriding member function, Abstract Class, Public and Private Inheritance, **B.sc IIND SEM Subject:- Structured Systems Analysis and Design**Logical and physical design, Design Methodologies, structured design, Form-Driven methodology(IPO charts), structured walkthrough,Input/Output**B.Com.IVth SEM( Vocational Course) Subject:-** Data Base Management System AdvancedDatabase Models,Database Security: Types of Database Failures, Types of Database Recovery**B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Computer Graphics: Computer Graphics Applications, Computer-Aided Design, PresentationGraphics,Computer Art  |
| **Week 9****HOLI BREAK** |
| **Week 10****BCA IVTH SEM Subject:- Object Oriented Programming Using C++**Ambiguity in Multiple inheritance,Virtual function, Friend function, Static function.**Assignment on inheritance****B.sc IIND SEM Subject:- Structured Systems Analysis and Design**form design: Input design, Objectives of input design,Output design, Objectives of output design, Form design, Classification of forms, requirements of form design,**Assignment on cost & benefit analysis****B.Com.IVth SEM( Vocational Course*) Subject:- Data Base Management System***-II Types of Database Security issue, Authorization and Authentication, Audit Trails,**Assignment on Authorization and Authentication****B.Com.IVth  SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Entertainment, Education and Training, Visualization, ImageProcessing, Graphical UserInterfaces,Display Devices, Overview of Display Method, **Assignment on image processing** |
| **Week11****BCA IVTH SEM Subject:- Object Oriented Programming Using C++**Exception Handling:Exception and derived class, function exception declaration,**B.sc IIND SEM Subject:- Structured Systems Analysis and Design**Types of forms, Layout considerations, Form control. System testing: Introduction, Objectives of testing, Test plan, testing techniques/Types of system tests,**B.Com.IVth SEM( Vocational Course) Subject:-** Data Base Management System Firewalls,Data Encryptionand Data Decryption(Data Cryptography). Database Operation in Microsoft Access: Creating Table,Creating forms, creating a Simple Query Modifying a Query**B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Raster Scan Display Processing Unit, InputDevices for Interactive Graphics,  |
| **Week12****BCA IVTH SEM Subject:- Object Oriented Programming Using C++**unexpected exception, exception when handling exception, resource capture and release.**B.sc IIND SEM Subject:- Structured Systems Analysis and Design**Quality assurance goals in system life cycle, System implementation, Process of implementation, Systemevaluation, System maintenance and its types, System documentation, Forms of documentation**B.Com.IVth SEM( Vocational Course) Subject:- Data Base Management System-II** Types ofQuery, subqueries, retrieveal and deletion,Microsoft Power Point: Introduction,Tools, Menus ,slides,Animation**B.Com.IVth SEM( Vocational Course) Subject:- StructuralProgramming & Computer Graphics-II**Programmers Model of Interactive GraphicsSystems,Storage Formats for Pictures.  |

 **Name of Assistant/Associate Professor:** Ms. Neeru Manocha

 **Lesson Plan: 14 weeks (from January 2018 to April 2018)**

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| **Week 1****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Computer Aided Design: Implementations of CAD, Features of CAD, Future of CAD**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Information Technology Basis: Introduction, Information, Information Technology (IT), Present Scenario, Role of Information Technology**Class- BCA 6th sem Subject-E-commerce**Electronic Commerce: Overview of Electronic Commerce, Scope of Electronic Commerce, Traditional Commerce vs. Electronic Commerce.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Software and software engineering: Software characteristics, Software Processes, software crisis. |
| **Week 2****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Artificial Inelegancy(AI) for intelligent and manufacturing, Element of AI**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Introduction to Telecommunications, Computer Networks, Communication Systems, Internet and W.W.W. , E–Mail, Introduction to Intranets & Extranets.**Class- BCA 6th sem Subject-E-commerce**Impact of E-Commerce, Electronic Markets, Internet Commerce, e-commerce in perspective, Application of E Commerce in Direct Marketing and Selling.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Software life cycle models, Waterfall, Prototype, Evolutionary and Spiral Models. |
| **Week 3****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Knowledge based Expert System, Machine Vision SystemAssignment On Computer Aided Design**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Emerging trends in IT: Introduction, Electronic Commerce (E-Commerce), (EDI) Electronic Data Interchange,Mobile Communication, Bluetooth**Class- BCA 6th sem Subject-E-commerce**Obstacles in adopting E-Commerce Applications; Future of Ecommerce**.**Assignment On Overview of Electronic Commerce (Complete Topic)**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**software engineering paradigms, goals and principles of software engineering. |
| **Week 4****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Neural Networks,Hardware & Software requirements of Auto CAD, Data Communication and networks**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Global positioning system,Imminent communication, Smart Card, Imminent Technologies.Assignment On Information Technology**Class- BCA 6th sem Subject-E-commerce** Value Chains in electronic Commerce, Supply chain, Porter’s value chain Model, Inter Organizational value chains Strategic Business unit chains.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Software requirement analysis –Structured analysis, object-oriented analysis and data modeling.Assignment On Software life cycle models. |
| **Week 5****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Data Encryption , Definition and Robot history, Features of Robots, Application of Robots in Industry**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Types of Modern Data base Mgt. System,; Distributed data processing:-Introduction, Advantages and disadvantages of Distributed Systems**Class- BCA 6th sem Subject-E-commerce**Industry value chains ,Security Threats to E-commerce: Security Overview, Computer Security Classification, Copyright and Intellectual Property, security Policy and Integrated Security, Intellectual Property Threats.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**software requirement specification, validation. |
| **Week 6****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Robot Programming Methods and Robot Programming Language.**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Introductions to Multimedia: introduction, Multimedia Systems, Multimedia Authoring Tools,Types of Presentations, Multimedia in Marketing and educations,Introduction to virtual Reality.**Class- BCA 6th sem Subject-E-commerce**electronic Commerce Threats, Clients Threats, Communication Channel Threats, server Threats.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Software requirements Analysis and Specifications: Requirement engineering, requirements analysis using DFD, Data Dictionaries and E-R Diagram. |
| **Week 7****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Multimedia: Definitions, Multimedia Components; Compact disk, Sounds, Image, Text**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**New Technologies in Introduction Technology: Introduction to Hypermedia, Artificial Intelligence and Business Intelligence.**Class- BCA 6th sem Subject-E-commerce**Implementing security for E-Commerce: Protecting E-Commerce Assets, Protecting Intellectual Property**.**Test On Security Threats to E-commerce.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**requirement documentation, nature of SRS, characteristics and organization of SRS.Test On Software requirements Analysis and Specifications. |
| **Week 8****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Industrial Report; Hypertext, hypermediaTest on Data Communication and networks**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Knowledge Discovery in Data base ( KDD), Data wise houses and Data Marts, Data Mining ,On line Analytical Processing (OLAP)Test On Introductions to Multimedia **Class- BCA 6th sem Subject-E-commerce**Protecting Client Computers, Protecting E-commerce Channels, Insuring Transaction Integrity, Protecting the Commerce Server**.****Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Software project management: Planning a software project, Software cost estimation. |
| **Week 9** **HOLI BREAK** |
| **Week 10****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Animation, Morphing, VideoAssignment On Robot History**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business** Enterprise Resource Planning (ERP); Introduction, reason for growth of ERP in Market Benefits of ERP SupplyChain Management (SCM): Element of Supply Chain, Advantage of SCM**Class- BCA 6th sem Subject-E-commerce**Electronic Payment System: Electronic Cash, Electronic Wallets, Smart Card, Credit and Change Card**.****Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**project scheduling, personnel planning, team structure.Discussion On Software project management. |
| **Week 11****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Virtual Reality, Virtual Reality Technology and Tools,**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Evaluation of CRM, Customer Relationship Management (CRM) & Retailers, Geographic Information System (GIS)**Class- BCA 6th sem Subject-E-commerce**Business to Business E-Commerce: Inter-organizational Transitions, Credit Transaction Trade Cycle.Assignment On EPS.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Software configuration management, software quality and quality assurance, project monitoring, risk management. |
| **Week 12****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Computer-Integrated manufacturing Systems. **Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Computer in Business and Industry : Accounting Inf. System (AIS): Meaning, Characteristics, its Major Sub System,Management Information System: Meaning. Concept, Input & Output of MISAssignment On ERP,CRM,GIS**Class- BCA 6th sem Subject-E-commerce**A variety of transactions.Discussion On Enterprise Resource Planning (ERP)**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Design and implementation of software- Software design fundamentals, software design principles. |
| **Week 13****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Computer Graphic: Applications of Computer Graphics, Display devices Basic Terms;Raster-Scan Display,Randam Scan DisplayTest On Computer-Integrated manufacturing Systems**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Decision support System, Office Automation Systems, Executive Inf. System, Marketing Inf. System and Financial Information System, Mobile Computing and Business on the Internet: Mobile computing, Mobile Newspaper, Tele Communicating,Wireless Mobile Computing**Class- BCA 6th sem Subject-E-commerce**Electronic Data Interchange (EDI): Introduction to EDI, Benefits of EDI, EDI Technology**.****Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Cohesion and Coupling, Classification of Cohesion and Coupling.Test On Cohesion and Coupling |
| **Week 14****Class- B.Com III (Vocational) 6th sem Subject-Computer Aided Drafting & Advanced Topics in Computer-II**Direct View Storage Tube, Flat panel Display, Input Devices, hardcopy devices.Assignment On Virtual Reality, Virtual Reality Technology and Tools**Class- B.Com III (Vocational) 6th sem Subject-** **Information Technology in Business**Business on the Internet:Electronic Catalogs, Web advertising, Secure transactions theInternet:-Electronic Catalogs , Web Advertising, Secure Transactions.Test On Decision support System, Office Automation Systems, Executive Inf. System, Marketing Inf. System and Financial Information System.**Class- BCA 6th sem Subject-E-commerce**EDI standards, EDI Communication, EDI Implementation, EDI agreement, EDI security.Test On EDI.**Class- B.Sc.(Comp. Sc.) 6th sem Subject-Software Engineering**Function oriented design, object- oriented Design, design verification, monitoring and control.Assignment On Software configuration management, software quality and quality assurance. |

 **Name of Assistant/Associate Professor:** Ms. Anshu

 **Classes and Subjects :-** B.C.A II (DATA STRUCTURE – II),B.C.A III (Object Technologies & Programming using Java),

 B.sc II (Computer Science) (Data Structures with C /C++),B.B.A III (SAD) **Subject Lesson Plan: 14 weeks (from January 2018 to April 2018)**

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| **Week 1:****BCA II-**Binary search trees**BCA III-** Paradigms of Programming Language, Basic Concepts of OO Approach**B.sc III**Introduction to data structures, Data-Structure operations, Algorithm, Complexity**BBA III-** Introduction to analysis and design, System and it characteristics**Assignments:****BCA II:** AVL search trees**BCA III:** Comparison of Object Oriented and Procedure Oriented Approaches**B.sc II:** Algorithm Complexity**BBA III:** DFDs |
| **Week 2****BCA II-**AVL search trees, m-way search tree**BCA III-** Applications of OOPs, Benefits of OOPs**B.sc II-** Arrays, Array operations, Multi- dimensional arrays, sequential allocation, address calculations**BBA III-** SDLC, Case tools for analyst |
| **Week 3****BCA II-**B-trees, B+tree**BCA III-** Introduction To Java, Java Virtual Machine**B.sc II-** sparse arrays ,Stacks, primitive operations on stacks **BBA III-** ER data models**Assignments:****BCA II:** B-trees.B+trees**BCA III:** Applications of OOPs**B.sc II:** Stacks,**BBA III:** I-O design |
| **Week 4****BCA II:** Huffman’s algorithm**BCA III:** Abstraction and Encapsulation, Method Overriding**B.sc II:** Representation of stacks as an array ,stack-applications**BBA III:** feasibility study – economic, technical, operational**Test:****BCA II:** Huffman’s algorithm**BCA III:** Basic Concepts of OO Approach**B.sc II:** stack-applications**BBA III:** decision tables |
| **Week 5****BCA II-**Warshall’s algorithm for shortest path, Dijkstra algorithm for shortest path**BCA III-**J ava Operators, Expressions, Statements and Arrays**B.sc II-** Queues, operations on queue, circular queue, priority queue, Applications of queue**BBA III-** Design of DFDs, form design, screen design, report design**Assignments:****BCA II:** Dijkstra algorithm for shortest path**BCA III:** Java Virtual Machine**B.sc II:** Queues**BBA III:** decision trees |
| **Week 6****BCA II-** Operations on graphs, Traversal of graph **BCA III-**Static methods, Constructors , Overloading constructors; This Keyword**B.sc II-** Linked List-introduction and basic operations, Header nodes, doubly linked list, circular linked list, Applications of linked list**BBA III-** structure chart, data base definition, equipment specification and selection |
| **Week 7****BCA II-** Topological sorting, Radix sort **BCA III-**Method overloading, Garbage Collection, The Finalize ( ) Method**B.sc II-** Representation of linked list as an array, stacks and queues**BBA III-** data dictionary, decision tables, decision trees**Assignments:****BCA II:** Topological sorting**BCA III:** This Keyword, Static methods**B.sc II:** Linked List**BBA III:** distributed data processing |
| **Week 8****BCA II-** Quick sort, Heap sort,**BCA III-**Inheritance, Method Overriding, Abstract Classes, Polymorphism**B.sc II-**Tree, Tree traversal algorithms**BBA III-** logical design to physical implementation, distributed data processing**Test:****BCA II:** Warshall’s algorithm for shortest path**BCA III:** Constructors, The Finalize ( ) Method**B.sc II:** threaded trees**BBA III:** designing distributed data base |
| **Week 9****HOLI BREAK** |
| **Week 10****BCA II-** Merge sort, Tournament sort,**BCA III-** Packages, Interfaces ,Exceptions Handling **B.sc II-** binary search trees, threaded trees**BBA III-** real time systems**Assignments:****BCA II:** Quick sort, Heap sort**BCA III:** Package**B.sc II:** AVL Trees**BBA III:** designing distributed data base |
| **Week 11****BCA II-** Liner search, binary search, merging**BCA III-**Multithreading, Synchronization in Java, Inter thread Communication**B.sc II-** AVL Trees, Polish notation and expression trees**BBA III-** distributing system |
| **Week 12****BCA II-** Physical storage devices and their characteristic,Serial, Sequential, Indexed-sequential file organization**BCA III-**Streams and Stream Classes, Reading and Writing Files**B.sc II-** Graph, . Graph traversals**BBA III-** designing distributed data base**Assignments:****BCA II:** Tournament sort**BCA III:** Interfaces,**B.sc II:** shortest paths, spanning trees**BBA III:** state transition diagrams |
| **Week 13****BCA II-** Random-access/Direct, Inverted, Multilist file organization file organization**BCA III-**The Transient and Volatile Modifiers , Using Instance of Native Methods**B.sc II-** shortest paths, spanning trees,searching**BBA III-** event based real time analysis tools**Test:****BCA II:** File organization**BCA III:** Multithreading**B.sc II:** Internal and external sorting**BBA III:** data dictionary, decision tables, decision trees |
| **Week 14****BCA II-** Hashing functions and Collision resolution methods**BCA III-**The String Class, Data Conversion using Value Of ( ) Methods , String Buffer Class and Methods**B.sc II-** Sorting**BBA III-** state transition diagrams |

 **Name of Assistant/Associate Professor:** Ms. Kriti

 **Lesson Plan: 15 weeks (from January 2018 to April 2018)**

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| **Week 1****BCA VITH SEM Subject:- Artificial Intelligence** **Overview of A.I:** Introduction to AI Importance of AI AI and its related field AI Techniques& Criteria for success.**BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Introduction to system,Definition and characterIINDics of a system,Elements of system,Types of system, System development life cycle, Role of system analyst,**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**Introduction to Computers – History basic anatomy, operating system, memory**BBA VITH SEM Subject:- Ecommerce** Introduction – meaning, nature, concepts, advantages and reasons for transacting online |
| **Week 2****BCA VITH SEM Subject:- Artificial Intelligence** **Problems, problem space and search**: Defining the problem as a state space search,Production system and its characterIINDics Issues in the design of the search problem**Test on: Overview of A.I** **BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Elements of system,Types of system, System development life cycle, Role of system analyst,**Test on SDLC** **BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**input/output devices;types of computers, classification of computers;hardware and software.**Test on MEMORY****BBA VITH SEM Subject:- Ecommerce** categories of e-commerce; planning online business: nature and dynamics of the internet, pure online vs. brick and click business**Test on online transaction**  |
| **Week 3****BCA VITH SEM Subject:- Artificial Intelligence** **Heuristic search techniques** : Generate and testHill climbing, Best first search technique**Difference between heuristic search technique & general problem solving method** **BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Information gathering, information gathering tools, Fact analysis, Determination of feasibility.**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**input/output devices;types of computers, classification of computers;hardware and software.**BBA VITH SEM Subject:- Ecommerce** assessing requirement for an online business, designing, developing and deploying the system, one to one enterprise. |
| **Week 4****BCA VITH SEM Subject:- Artificial Intelligence** **Heuristic search techniques** :Problem reduction Constraint satisfaction**Knowledge Representation**: Definition and importance of knowledge,**Assignment on search techniques** **BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Structured analysis, Tools of structured analysis: DFD, Data dictionary, Flow charts, Gantt charts**Assignment on information gathering tools****BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**Introduction to information technologies; www, search engines, web browsers,**Assignment on input devices/output device** **BBA VITH SEM Subject:- Ecommerce** Technology for online business – internet, IT infrastructure;**Assignment on plastic money** |
| **Week 5****BCA VITH SEM Subject:- Artificial Intelligence** **Knowledge Representation**: Knowledge representation Various approaches used in knowledge representation, Issues in knowledge representation.**Expert System**: Introduction to expert system Application  Advantages & Disadvantages **BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** decision tree, decision table,structured English,Pros and cons of each tool,**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**IP addressing, web hosting and web publishing**BBA VITH SEM Subject:- Ecommerce** middlewarecontents: text and integrating e-business applications; mechanism of making payment through internet |
| **Week 6****BCA VITH SEM Subject:- Artificial Intelligence** **Expert System**: Representing using domain specific knowledge Expert System Architecture  Difference b/w human expert , expert system , conventional program  Difference b/w data base & knowledge base  Categories of knowledge Test on expert system**BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Feasibility study: Introduction, Objective, Types, Steps in feasibility analysis Feasibility report, Oral presentation,Test on structured analysis **BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**Internet applications in business, chatting and e-mailing;Test on ip addressing**BBA VITH SEM Subject:- Ecommerce** online payment mechanism, electronic payment systems, payment gateways, visitors to website, tools for promoting website;test on types of ecommerce credit card; laws relating to online transactions. |
| **Week 7****BCA VITH SEM Subject:- Artificial Intelligence** **Expert System**: Expert system development life cycle  Expert System Shell **Natural language processing** : Introduction syntactic processing,  Semantic processing, Discourse and pragmatic processing.**BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Cost and benefit analysis: Identification of costs and benefits,classification of costs and benefits**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**computer applications, advantages and limitations,**BBA VITH SEM Subject:- Ecommerce** plastic money: debit card |
| **Week 8****BCA VITH SEM Subject:- Artificial Intelligence** **Natural language processing** : importance of Natural language understanding  Comparison b/w natural language & formal language  Major steps in NPL Grammars and types of grammars **BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Methods of determining costs and benefits, Interpret results of analysis and take final action.**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**use in offices,educationinstitutionshealthcare**BBA VITH SEM Subject:- Ecommerce** Applications in e-commerce |
| **Week 9****HOLI BREAK** |
| **Week 10****BCA VITH SEM Subject:- Artificial Intelligence** **Natural language processing** Parsers & Types of Parsers Semantic analysis pragmaticsNatural language generation Advantage limitation & application of NLP**Assignment on types of grammar****BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** System Design: System design objective, Logical and physical design, Design Methodologies**Assignment on cost & benefit analysis****BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**Data, information and types; Information systems**Assignment on application of computers****BBA VITH SEM Subject:- Ecommerce** e-commerce applications in manufacturing,wholesale, retail and service sector.**Assignment on application of ecommerce**  |
| **Week11****BCA VITH SEM Subject:- Artificial Intelligence** **LEARNING** Definition of learning , machine learning Phases of learning Learning system model Advantages & disadvantage of learningTest on natural language processing **BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** structured design, Form-Driven methodology(IPO charts), structured walkthrough,Input/Output and form design: Input design, Objectives of input design,Output design**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**types – MIS, TPS, OAS, DSS**BBA VITH SEM Subject:- Ecommerce** Virtual existence – concepts, working, advantages and pitfalls of virtual organizationsworkface, work zone and workspace and staff less organization |
| **Week12****BCA VITH SEM Subject:- Artificial Intelligence** **LEARNING**  Rote learning,  Learning by taking advice Learning in problem solving, Learning from example-induction,  Explanation based learning.Test on NLP**BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** Objectives of output design, Form design,Classification of forms, requirements of form design, Types of forms, Layout considerations, Form control.**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**expert systems, executive information systems.Test on types of information system **BBA VITH SEM Subject:- Ecommerce** designing on E-commerce model for a middle level organization: the conceptualdesign, giving description of its transaction handling,Test on virtual existence  |
| **Week13****BCA VITH SEM Subject:- Artificial Intelligence** **Using Predicate Logic** : Representing simple facts in logic Uses of logic in AI Types of logic Prepositional logic  Limitations of prepositional logicB**CA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** System testing: Introduction, Objectives of testing, Test plan, testing techniques/Types of system tests, Quality assurance goals in system life cycle, System implementation,Process of implementation**BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**Multimedia applications in business;**BBA VITH SEM Subject:- Ecommerce** infrastructure andresources required and system flow chart |
| **Week14****BCA VITH SEM Subject:- Artificial Intelligence** **Using Predicate Logic** : Predicate logic Use of backward chaining  Representing instance & isa relationship Computable function & predicates  Problem with fol representation  Limitation of fol**BCA IIND SEM Subject:- SYSTEM ANALYSIS AND DESIGN** System evaluation, System maintenance and its types,Systemdocumentation,Forms of documentationTest on system testing **BBA IIND SEM Subject:- COMPUTER APPLICATIONS IN MANAGEMENT**marketing and advertising; web applications of multimedia.**BBA VITH SEM Subject:- Ecommerce** security in e-commerce: digitalsignatures, network security, data encryption secret keys, data encryption.  |

 **Name of Assistant/Associate Professor:** Ms. Neeru Jain

 **Classes and Subjects :-** BCA IInd(Software Engineering ),B.Com Vocational Ist(A 2.05 Computer Fundamentals-II),

 B.Com Vocational Ist(A 2.06 Operation system and Business Data Processing-II),M.Com(Prev) IInd sem(Computer Applications to Business-II)

 **Subject Lesson Plan: 14 weeks (from January 2018 to April 2018)**

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| **Week 1:****BCA II -** Software Crisis,software Processes,software Lifecycle Models**.****B.Com Voc I A 2.05-** Model,Functioning and Types of a Digital Computer.**B.Com Voc I A2.06 -** Data Information and Data processing.**M.Com(prev)-** Introduction and Working with MS-word in MS-Office.**Assignments:****BCA II**- various Software Lifecycle models.**B.Com Voc I A 2.05-** Types of Digital Computer.**B.Com Voc I A2.06-**Data Processing System,need of data and information,data storage hierarchy**M.Com(prev)**- Various Menu description |
| **Week 2:****BCA II-**Types of Models,Requirement Engineering.**B.Com Voc I A 2.05-** Advantages of Digital Computer,Difference Between Digital and Analog Computer.**B.Com Voc I A2.06-** File Management System,types,utilities,sorting,searching.**M.Com(prev)-**Formatting Commands in Ms.word and working with tables.**Test :****BCA II**-Software Models and Requirement Engineering.**B.Com Voc I A 2.05-** Digital Computer Block diagram and working.**B.Com Voc I A2.06-**file management.**M.Com(prev)**- timetable designing using tables |
| **Week 3:****BCA II-**FAST,QFD,DFD,Data Dictionary.ER Diagrams.**B.Com Voc I A 2.05-** Arithmetic and Number System,ASCII Character set.**B.Com Voc I A2.06**- file utility merging,copying,printing and maintainance**.**.**M.Com(prev)-**graphics in ms.word and mailmerge.**Assignment:****BCA II**-DFD’s,ER-Diagram.**B.Com Voc I A 2.05-** ASCII Character sets,Number System.**B.Com Voc I A2.06-**file Management utilities.**M.Com(prev)**- mailmerge with steps |
| **Week 4:****BCA II-**SRS Documentation,Software Project Management.**B.Com Voc I A 2.05-** EBCDEC character sets,Software Concepts,Types,Hardware and Software.**B.Com Voc I A2.06**- DBMS,objectives of database,components,advantages and disadvantages.**M.Com(prev)-**MS-Excel formatting ,functions,charts.**Test :****BCA II**-FAST,QFD Techniques.**B.Com Voc I A 2.05-** Software and hardware difference.**B.Com Voc I A2.06-**DBMS Components.**M.Com(prev)**- Functions in MS-Excel |
| **Week 5:****BCA II-**Risk management,Software Design,Cohesion and Coupling Introduction.**B.Com Voc I A 2.05-** Various System Software,Translators.**B.Com Voc I A2.06-** DBA,DBMS and its functioning,components**.**.**M.Com(prev)-**graphics in ms excel,using worksheets in marketing,finance etc.**Assignment :** **BCA II**- SRS Documentation**B.Com Voc I A 2.05-** Compiler,Assembler,Interpretor**.****B.Com Voc I A2.06-**Functioning model of dbms.**M.Com(prev)**- ms.excel formatting commands |
| **Week 6:****BCA II-**Object Oriented design,Software Metrics Introduction.**B.Com Voc I A 2.05-** System utilities,Loader,Linker.**B.Com Voc I A2.06-** data definition language,query language**,**.**M.Com(prev)-**ms.powerpoint creation,working with graphics.**Test :****BCA II**- Cohesion and Coupling.**B.Com Voc I A 2.05-** various system softwares.**B.Com Voc I A2.06-**DBA,DDL.**M.Com(prev)**- sound effects n graphics in ms.powerpoint |
| **Week 8:****BCA II-**Halstead software science measures,Metrics review.**B.Com Voc I A 2.05-** spread sheet software,graphical software,entertainment Software.**B.Com Voc I A2.06-** Report Generator,Architecture of dbms..**M.Com(prev)-**Lotus softwar and various menu’s.**Test :****BCA II**- Risk management.**B.Com Voc I A 2.05-** Functions in spreadsheet software.**B.Com Voc I A2.06-**dbms and file system.**M.Com(prev)**- ms.excel graphics |
| **Week 9:****HOLI BREAK** |
| **Week 10:****BCA II-**software implementation,Relationship between Design and Implementation.s**B.Com Voc I A 2.05-** introduction to windows,Windows as an operating system,Control Panel.**B.Com Voc I A2.06-** various keys in dbms,primary,foreign,candidate,alternate,super.**M.Com(prev)-**Accounting packages:tally,wings**Assignment :****BCA II**- Types of software Metrics.**B.Com Voc I A 2.05-** Windows features and various types of windows.**B.Com Voc I A2.06-**keys in dbms and their functioning.**M.Com(prev)**- tally shortcut keys |
| **Week 11:****BCA II-**implementation issues and programming support environment,coding.**B.Com Voc I A 2.05-** Data Communication modes,forms of data transmission.**B.Com Voc I A2.06-** database models,hierarichal model.**M.Com(prev)-**wings commands**Test :****BCA II**- Software Implementation.**B.Com Voc I A 2.05-** Data communication modes.**B.Com Voc I A2.06-**test of dbms keys.**M.Com(prev)**- tally vouchers  |
| **Week 12:****BCA II-**good Coding Style,Software Testing,types of Testing Introduction.**B.Com Voc I A 2.05-** data communication channels,computer networks.**B.Com Voc I A2.06-** . network model and relational model.**M.Com(prev)-**statistical packages spss**Assignment :****BCA II**-Software Programming environment and software coding.**B.Com Voc I A 2.05-** Forms of data communication with diagram.**B.Com Voc I A2.06-** Models in DBMS.**M.Com(prev)**-spss commands |
| **Week 13:****BCA II-**Types of Testing and dsebugging activities,Software Maintainance.**B.Com Voc I A 2.05-** Types of computer networks,internet and its applications,services of internet.**B.Com Voc I A2.06-** Ms.Access features and structure.**M.Com(prev)-**systat and revision.**Test :****BCA II**-software Testing types.**B.Com Voc I A 2.05-** Data transmission media**B.Com Voc I A2.06-**Models in dbms.**M.Com(prev)**- spss and systat commands |
| **Week 14:****BCA II-**Maintainance process and reverse engineering and REVISION.**B.Com Voc I A 2.05-** MS.Excel Overview and Revision.**B.Com Voc I A2.06-** MS-Excel and MS-Access commands and revision.**M.Com(prev)-**Revision.**Assignment:****BCA II**- Debugging Activities, Software Maintainance**B.Com Voc I A 2.05-** MS.Excel Commands-Audit,goal seek,filter**B.Com Voc I A2.06-** form designing in ms access and querry processing.**M.Com(prev)**- Explain Visual Basic |