**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 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  **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 & associativity  Assignment 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, overriding  Assignment 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 computer  Assignment on Introduction of computer |
| **Week 2**  Generations of Computer, Types of computer: Analog, Digital and Hybrid computers, Micro, Mini, Mainframe and Super Computer  Input 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, Spell  Check 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 Models  Assignment 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 manipulations  Assignment 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, reference  types, 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 expressions  Test 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-II  Digital 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 System  RAID (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-II  Decision 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 System  Assignment 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, hypermedia  Test 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, Video  Assignment 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 MIS  Assignment 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 Display  Test 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 test  Hill 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**  middleware  contents: 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,  education  institutions  healthcare  **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 pragmatics  Natural 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 learning  Test 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 organizations  workface, 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 conceptual  design, 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 logic  B**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 and  resources 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 documentation  Test 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: digital  signatures, 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 |