**Lesson Plan**

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**Department** : Computer Science and Applications

**Lesson Plan**- 19 Weeks (July-Nov 2018)

**Classes**: **BCA Sem-I**

**BCA Sem-III**

**B.Sc Computer Science Sem-III**

**B.Sc Non Med (CAL) Sem-I**

**PGDCA**

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| **Week** | **Date** | **BCA (1st Sem)**  **Programming in C**  **BCA-116** | **BCA (IIIrd Sem)**  **Object Oriented Programming using C++**  **BCA-231** | **BSC (IIIrd Sem)**  **Data Structures**  **Paper-I** |
| 1 | 16-July-18 | Overview of C, History of C, Importance of C | Object-Oriented programming features and benefits |  |
| 17-July-18 | Structure of a C Program | Object-Oriented features of C++ |  |
| 18-July-18 | C character set, identifiers and keywords | Class and Objects |  |
| 19-July-18 |  |  | Introduction: Elementary data organization  Data Structure definition, Data type vs. data structure  Categories of data structures |
| 20-July-18 |  |  | Data structure operations  Applications of data structures |
| 21-July-18 |  |  | Algorithms complexity and time-space tradeoff  Big-0 notation |
| 22-July-18 | Sunday | |  |
| 2 | 23-July-18 | Data types | Data Hiding & Encapsulation, Structures |  |
| 24-July-18 | Constants and Variables | Data members, Member functions |  |
| 25-July-18 | Assignment statement, Symbolic constant | Scope resolution operator and its significance |  |
| 26-July-18 |  |  | Arrays: Introduction  Linear arrays |
| 27-July-18 |  |  | Representation of linear array in memory  Traversal |
| 28-July-18 |  |  | Insertions  Deletion in an array |
| 29-July-18 | Sunday | |  |
| 3 | 30-July-18 | Unformatted I/O function in C | Static Data Members, Static member functions |  |
| 31-July-18 | Shaheedi udham singh’s martyrdom day | |  |
| 1-Aug-18 | formatted I/O function in C | Nested Class, Local Class |  |
| 2-Aug-18 |  |  | Multidimensional arrays  Parallel arrays  Sparse matrices |
| 3-Aug-18 |  |  | **Assignment 1** |
| 4-Aug-18 |  |  | Stack: Introduction, Operations on stacks  Array representation of stacks |
| 5-Aug-18 | Sunday | |  |
| 4 | 6-Aug-18 | Input functions ( scanf(), getch(), getche(),getchar(), gets()) | Accessing Members of Class and Structure |  |
| 7-Aug-18 | Output functions ( printf(), putch(),putchar(), puts()). | Revision |  |
| 8-Aug-18 | Assignment 1 With viva | Constructor |  |
| 9-Aug-18 |  |  | linked representation of stacks,Quicksort |
| 10-Aug-18 |  |  | Applications of stacks: Polish notation,Recursion |
| 11-Aug-18 |  |  | Queues: Introduction, Operations on queues  Array representation of queues |
| 12-Aug-18 | Sunday | |  |
| 5 | 13-Aug-18 | Haryali teej | |  |
| 14-Aug-18 | TEST | Initialization using constructor |  |
| 15-Aug-18 | Independence day | |  |
| 16-Aug-18 |  |  | linked representation of queues |
| 17-Aug-18 |  |  | Circular Queues,Priority Queues, Applications of queues |
| 18-Aug-18 |  |  | Revision of Covered Topics |
| 19-Aug-18 | Sunday | |  |
| 6 | 20-Aug-18 | Arithmetic Operators | types of constructor– Default, Parameterized constructor |  |
| 21-Aug-18 | Relational Operators | Copy Constructors |  |
| 22-Aug-18 | Id-ul-zuha(bakrid) | |  |
| 23-Aug-18 |  |  | Alogrithm on insertion and deletion in simple queue and circular queue |
| 24-Aug-18 |  |  | Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory |
| 25-Aug-18 |  |  | Traversal |
| 26-Aug-18 | Sunday | |  |
| 7 | 27-Aug-18 | Logical & Bitwise Operators | Constructor overloading |  |
| 28-Aug-18 | Unary Assignment Operators | Default Values to Parameters |  |
| 29-Aug-18 | Conditional Operators | Destructors |  |
| 30-Aug-18 |  |  | Insertion |
| 31-Aug-18 |  |  | Deletion |
| 1-Sep-18 |  |  | Searching in a linked list |
| 2-Sep-18 | Sunday | |  |
| 8 | 3-Sep-18 | Janmashtmi | |  |
| 4-Sep-18 | Special Operators | Assignment 1 |  |
| 5-Sep-18 | Arithmetic expressions | Console I/O: Hierarchy of Console Stream Classes |  |
| 6-Sep-18 |  |  | Header linked list |
| 7-Sep-18 |  |  | Circular linked list |
| 8-Sep-18 |  |  | Two-way linked list |
| 9-Sep-18 | Sunday | |  |
| 9 | 10-Sep-18 | evaluation of arithmetic expression | Unformatted and Formatted I/O Operations |  |
| 11-Sep-18 | Assignment 2 With viva | Revision |  |
| 12-Sep-18 | Assignment 2 With viva | Manipulators |  |
| 13-Sep-18 |  |  | Garbage collection  Applications of linked lists |
| 14-Sep-18 |  |  | Algorithms for Insertion, deletion in SSL |
| 15-Sep-18 |  |  | Tree: Introduction,Terminology  Representing Binary tree |
| 16-Sep-18 | Sunday |  |  |
| 10 | 17-Sep-18 | type casting and conversion | Friend Function |  |
| 18-Sep-18 | operator hierarchy & associativity | Friend Class |  |
| 19-Sep-18 | Decision making with IF statement | Sessional |  |
| 20-Sep-18 |  |  | Traversing binary trees-In order, Pre order & Post order |
| 21-Sep-18 |  |  | Applications of Binary Tree |
| 22-Sep-18 |  |  | Algorithm of tree traversal with recursion |
| 23-Sep-18 | Sunday |  |  |
| 11 | 24-Sep-18 | Sessional | Arrays, Array of Objects |  |
| 25-Sep-18 | IF-ELSE statement | Passing and Returning Objects to Functions |  |
| 26-Sep-18 | Nested IF statement | String Handling in C++ |  |
| 27-Sep-18 |  |  | Algorithm of tree traversal  without recursion |
| 28-Sep-18 |  |  | Revision |
| 29-Sep-18 |  |  | Assignment -2 |
| 30-Sep-18 | Sunday | |  |
| 12 | 1-Oct-18 | ELSE-IF ladder | Dynamic Memory Management: Pointers, new and delete Operator |  |
| 2-Oct-18 | Mahatma gandhi’s jayanti | |  |
| 3-Oct-18 | switch statement, goto statement | Array of Pointers to Objects, this Pointer |  |
| 4-Oct-18 |  |  | Directed Graphs |
| 5-Oct-18 |  |  | Undirected Graphs |
| 6-Oct-18 |  |  | Doubts |
| 7-Oct-18 | Sunday | |  |
| 13 | 8-Oct-18 | While & Do-While Loop | Passing Parameters to Functions by Reference & pointers |  |
| 9-Oct-18 | For Loop | Assignment 2 |  |
| 10-Oct-18 | Maharaja aggarsen jayanti | |  |
| 11-Oct-18 |  |  | Sessional |
| 12-Oct-18 |  |  | Revision |
| 13-Oct-18 |  |  | Representation of Graphs |
| 14-Oct-18 | Sunday | |  |
| 14 | 15-Oct-18 | jumps in loops, break, continue statement | Polymorphism: Operators in C++, Precedence and Associativity Rules |  |
| 16-Oct-18 | Functions: Definition, prototype | Operator Overloading |  |
| 17-Oct-18 | passing parameters | Unary & Binary Operators Overloading |  |
| 18-Oct-18 | Dussehra | |  |
| 19-Oct-18 |  |  | Doubts |
| 20-Oct-18 |  |  | Doubts |
| 21-Oct-18 | Sunday | |  |
| 15 | 22-Oct-18 | Recursion | Unary & Binary Operators Overloading |  |
| 23-Oct-18 | Storage classes in C | Function Overloading |  |
| 24-Oct-18 | Maharishi valmiki’s birthday | |  |
| 25-Oct-18 |  |  | Revision |
| 26-Oct-18 |  |  | Revision |
| 27-Oct-18 |  |  |  |
| 28-Oct-18 | Sunday | |  |
| 16 | 29-Oct-18 | Arrays: Definition, types, initialization | Function Overloading |  |
| 30-Oct-18 | processing an array | Inline Functions |  |
| 31-Oct-18 | passing arrays to functions | Revision |  |
| 1-Nov-18 | Haryana day |  | Graph: Introduction, Graph theory terminology |
| 2-Nov-18 |  |  | Weighted Graph |
| 3-Nov-18 |  |  | Revision |
| 4-Nov-18 | Sunday |  |  |
| 17 | 5-Nov-18 | Strings & arrays | Revision |  |
| 6-Nov-18 | Holiday |  |  |
| 7-Nov-18 | Diwali |  |  |
| 8-Nov-18 | Holiday |  |  |
| 9-Nov-18 | Vishavkarma day |  |  |
| 10-Nov-18 | Holiday |  |  |
| 11-Nov-18 | Sunday |  |  |
| 18 | 12-Nov-18 | Holiday |  |  |
| 13-Nov-18 | Holiday |  |  |
| 14-Nov-18 | REVISION | Revision |  |
| 15-Nov-18 |  |  | Revision |
| 16-Nov-18 |  |  | Revision |
| 17-Nov-18 |  |  | Revision |
| 19 | 18-Nov-18 | Sunday |  |  |
| 19-Nov-18 |  |  |  |
| 20-Nov-18 |  |  |  |
| 21-Nov-18 |  |  |  |

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| **Week** | **Date** | **B.Sc Non Med (IstSem)** |
| 1 | 16-July-18 | Meaning and Definition of Computer, Characteristics of Computer |
| 17-July-18 | Applications of Computer |
| 18-July-18 |  |
| 19-July-18 |  |
| 20-July-18 |  |
| 21-July-18 |  |
| 22-July-18 | Sunday |
| 2 | 23-July-18 | Components of Computer system |
| 24-July-18 | Input Devices |
| 25-July-18 |  |
| 26-July-18 |  |
| 27-July-18 |  |
| 28-July-18 |  |
| 29-July-18 | Sunday |
| 3 | 30-July-18 | Continue Topic Input Devices |
| 31-July-18 | Shaheedi udham singh’s martyrdom day |
| 1-Aug-18 |  |
| 2-Aug-18 |  |
| 3-Aug-18 |  |
| 4-Aug-18 |  |
| 5-Aug-18 | Sunday |
| 4 | 6-Aug-18 | Output Devices |
| 7-Aug-18 | Concept of Memory |
| 8-Aug-18 |  |
| 9-Aug-18 |  |
| 10-Aug-18 |  |
| 11-Aug-18 |  |
| 12-Aug-18 | Sunday |
| 5 | 13-Aug-18 | Haryali teej |
| 14-Aug-18 | Magnetic Devices |
| 15-Aug-18 | Independence day |
| 16-Aug-18 |  |
| 17-Aug-18 |  |
| 18-Aug-18 |  |
| 19-Aug-18 | Sunday |
| 6 | 20-Aug-18 | Optical Storage Devices |
| 21-Aug-18 | Meaning and Definition of Operating System |
| 22-Aug-18 | Id-ul-zuha(bakrid) |
| 23-Aug-18 |  |
| 24-Aug-18 |  |
| 25-Aug-18 |  |
| 26-Aug-18 | Sunday |
| 7 | 27-Aug-18 | Functions of Operating System |
| 28-Aug-18 | Oral Revision of Covered Topics and Introduction to Internet |
| 29-Aug-18 |  |
| 30-Aug-18 |  |
| 31-Aug-18 |  |
| 1-Sep-18 |  |
| 2-Sep-18 | Sunday |
| 8 | 3-Sep-18 | Janmashtmi |
| 4-Sep-18 | Applications of Internet |
| 5-Sep-18 |  |
| 6-Sep-18 |  |
| 7-Sep-18 |  |
| 8-Sep-18 |  |
| 9-Sep-18 | Sunday |
| 9 | 10-Sep-18 | Surfing the Internet using Web Browsers |
| 11-Sep-18 | Creating E-mail ID |
| 12-Sep-18 |  |
| 13-Sep-18 |  |
| 14-Sep-18 |  |
| 15-Sep-18 |  |
| 16-Sep-18 | Sunday |
| 10 | 17-Sep-18 | Continue Topic Creating E-mail ID |
| 18-Sep-18 | Viewing E-mail ID |
| 19-Sep-18 |  |
| 20-Sep-18 |  |
| 21-Sep-18 |  |
| 22-Sep-18 |  |
| 23-Sep-18 | Sunday |
| 11 | 24-Sep-18 | Sending an E-mail to a Single and Multiple users |
| 25-Sep-18 | Sending a file as an attachment |
| 26-Sep-18 |  |
| 27-Sep-18 |  |
| 28-Sep-18 |  |
| 29-Sep-18 |  |
| 30-Sep-18 | Sunday |
| 12 | 1-Oct-18 | Test of Some covered Topics |
| 2-Oct-18 | Mahatma gandhi’s jayanti |
| 3-Oct-18 |  |
| 4-Oct-18 |  |
| 5-Oct-18 |  |
| 6-Oct-18 |  |
| 7-Oct-18 | Sunday |
| 13 | 8-Oct-18 | Revision of Assignment Topics |
| 9-Oct-18 | Introduction to Word Processing |
| 10-Oct-18 | Maharaja aggarsen jayanti |
| 11-Oct-18 |  |
| 12-Oct-18 |  |
| 13-Oct-18 |  |
| 14-Oct-18 | Sunday |
| 14 | 15-Oct-18 | Menus of Word Processing |
| 16-Oct-18 | Continue Topic Menus |
| 17-Oct-18 |  |
| 18-Oct-18 | Dussehra |
| 19-Oct-18 |  |
| 20-Oct-18 |  |
| 21-Oct-18 | Sunday |
| 15 | 22-Oct-18 | Creating document in Word Processing |
| 23-Oct-18 | Continue Topic Creating document in Word Processing |
| 24-Oct-18 | Maharishi valmiki’s birthday |
| 25-Oct-18 |  |
| 26-Oct-18 |  |
| 27-Oct-18 |  |
| 28-Oct-18 | Sunday |
| 16 | 29-Oct-18 | Editing document in Word Processing |
| 30-Oct-18 | Continue Topic Editing document in Word Processing |
| 31-Oct-18 |  |
| 1-Nov-18 | Haryana day |
| 2-Nov-18 |  |
| 3-Nov-18 |  |
| 4-Nov-18 | Sunday |
| 17 | 5-Nov-18 | Spell Checking in Word Processing |
| 6-Nov-18 | Holiday |
| 7-Nov-18 | Diwali |
| 8-Nov-18 | Holiday |
| 9-Nov-18 | Vishavkarma day |
| 10-Nov-18 | Holiday |
| 11-Nov-18 | Sunday |
| 18 | 12-Nov-18 | Holiday |
| 13-Nov-18 | Holiday |
| 14-Nov-18 |  |

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| **Week** | **Date** | **PGDCA**  **PROBLEM SOLVING THROUGH ‘C’**  CS-DE-12 |
| 1 | 16-July-18 | Programming Fundamentals: Introduction to Compiler |
| 17-July-18 | Assembler and Interpreter |
| 18-July-18 | Concept of problem solving, Problem definition |
| 19-July-18 |  |
| 20-July-18 |  |
| 21-July-18 |  |
| 22-July-18 | Sunday |
| 2 | 23-July-18 | Program design |
| 24-July-18 | Debugging, Types of errors in programming |
| 25-July-18 | Types of errors in programming, Documentation |
| 26-July-18 |  |
| 27-July-18 |  |
| 28-July-18 |  |
| 29-July-18 | Sunday |
| 3 | 30-July-18 | Flowcharting |
| 31-July-18 | Shaheedi udham singh’s martyrdom day |
| 1-Aug-18 | decision tables |
| 2-Aug-18 |  |
| 3-Aug-18 |  |
| 4-Aug-18 |  |
| 5-Aug-18 | Sunday |
| 4 | 6-Aug-18 | algorithms |
| 7-Aug-18 | Structured programming concepts |
| 8-Aug-18 | Programming methodologies - top-down and bottom-up programming |
| 9-Aug-18 |  |
| 10-Aug-18 |  |
| 11-Aug-18 |  |
| 12-Aug-18 | Sunday |
| 5 | 13-Aug-18 | Haryali teej |
| 14-Aug-18 | Programming methodologies - top-down and bottom-up programming |
| 15-Aug-18 | Independence day |
| 16-Aug-18 |  |
| 17-Aug-18 |  |
| 18-Aug-18 |  |
| 19-Aug-18 | Sunday |
| 6 | 20-Aug-18 | Assignment 1 With viva |
| 21-Aug-18 | Overview of C: History of C, Importance of C |
| 22-Aug-18 | Id-ul-zuha(bakrid) |
| 23-Aug-18 |  |
| 24-Aug-18 |  |
| 25-Aug-18 |  |
| 26-Aug-18 | Sunday |
| 7 | 27-Aug-18 | Structure of a C Program. |
| 28-Aug-18 | Elements of C: C character set |
| 29-Aug-18 | identifiers and keywords, Data types |
| 30-Aug-18 |  |
| 31-Aug-18 |  |
| 1-Sep-18 |  |
| 2-Sep-18 | Sunday |
| 8 | 3-Sep-18 | Janmashtmi |
| 4-Sep-18 | Data types |
| 5-Sep-18 | Constants and Variables |
| 6-Sep-18 |  |
| 7-Sep-18 |  |
| 8-Sep-18 |  |
| 9-Sep-18 | Sunday |
| 9 | 10-Sep-18 | Operators: Arithmetic |
| 11-Sep-18 | Operators: Arithmetic, relational |
| 12-Sep-18 | Operators : relational, logical |
| 13-Sep-18 |  |
| 14-Sep-18 |  |
| 15-Sep-18 |  |
| 16-Sep-18 | Sunday |
| 10 | 17-Sep-18 | Operators : bitwise, unary |
| 18-Sep-18 | assignment and conditional operators |
| 19-Sep-18 | TEST |
| 20-Sep-18 |  |
| 21-Sep-18 |  |
| 22-Sep-18 |  |
| 23-Sep-18 | Sunday |
| 11 | 24-Sep-18 | assignment and conditional operators |
| 25-Sep-18 | hierarchy & associativity |
| 26-Sep-18 | Input/output: Unformatted & formatted I/O function in C |
| 27-Sep-18 |  |
| 28-Sep-18 |  |
| 29-Sep-18 |  |
| 30-Sep-18 | Sunday |
| 12 | 1-Oct-18 | Input/output: Unformatted & formatted I/O function in C |
| 2-Oct-18 | Mahatma gandhi’s jayanti |
| 3-Oct-18 | Sessional |
| 4-Oct-18 |  |
| 5-Oct-18 |  |
| 6-Oct-18 |  |
| 7-Oct-18 | Sunday |
| 13 | 8-Oct-18 | Revision of Operators: Arithmetic, relational |
| 9-Oct-18 | Revision of logical, bitwise, unary operators |
| 10-Oct-18 | Maharaja aggarsen jayanti |
| 11-Oct-18 |  |
| 12-Oct-18 |  |
| 13-Oct-18 |  |
| 14-Oct-18 | Sunday |
| 14 | 15-Oct-18 | Revision of assignment and conditional operators |
| 16-Oct-18 | Revision of Input/output: Unformatted & function in C. |
| 17-Oct-18 | Revision of Input/output: formatted I/O function in C. |
| 18-Oct-18 | Dussehra |
| 19-Oct-18 |  |
| 20-Oct-18 |  |
| 21-Oct-18 | Sunday |
| 15 | 22-Oct-18 | Control statements |
| 23-Oct-18 | TEST |
| 24-Oct-18 | Maharishi valmiki’s birthday |
| 25-Oct-18 |  |
| 26-Oct-18 |  |
| 27-Oct-18 |  |
| 28-Oct-18 | Sunday |
| 16 | 29-Oct-18 | Control statements: Sequencing |
| 30-Oct-18 | Selection: if and switch statement |
| 31-Oct-18 | Assignment 2 |
| 1-Nov-18 | Haryana day |
| 2-Nov-18 |  |
| 3-Nov-18 |  |
| 4-Nov-18 | Sunday |
| 17 | 5-Nov-18 | REVISION |
| 6-Nov-18 | Holiday |
| 7-Nov-18 | Diwali |
| 8-Nov-18 | Holiday |
| 9-Nov-18 | Vishavkarma day |
| 10-Nov-18 | Holiday |
| 11-Nov-18 | Sunday |
| 18 | 12-Nov-18 | Holiday |
| 13-Nov-18 | Holiday |
| 14-Nov-18 | Selection: if and switch statement |
| 15-Nov-18 |  |
| 16-Nov-18 |  |
| 17-Nov-18 |  |
| 19 | 18-Nov-18 | Sunday |
| 19-Nov-18 | Selection: if and switch statement |
| 20-Nov-18 | Repetition: for |
| 21-Nov-18 | Repetition: for |