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| **GBN Govt. Polytechnic Nilokheri** | | | | |
| **Name of Faculty: Naresh Grover** | | | | |
| **Discipline: Computer Science & Engg.** | | | | |
| **Semester: 3** | | | | |
| **Subject: Programming in C** | | | | |
| Lesson Plan Duration: 15 Weeks | | | | |
| **Week** | **Theory** | | **Practical** | |
|  | **Lecture Day** | **Topic** | **Practical Day** | **Topic** |
| **Week 1** | Day 1 | **Unit 1: Algorithm and Programming Development** | Day 1 | Programming exercises on executing and editing a C program |
| Day 2 | Steps in development of a program |
| Day 3 | Steps in development of a program |
| Day 4 | Flow charts, Algorithm development |
| **Week 2** | Day 5 | Program Debugging | Day 2 | Programming exercises on defining variables and assigning values to variables. |
| Day 6 | **Test Unit 1** |
| Day 7 | **Unit 2: Program Structure** |
| Day 8 | I/O statements |
| **Week 3** | Day 9 | assign statements | Day 3 | Programming exercises on arithmetic and relational operators |
| Day10 | Constants, variables |
| Day 11 | data types |
| Day 12 | Operators |
| **Week 4** | Day 13 | Expressions | Day 4 | Programming exercises on arithmetic expressions and their evaluation. |
| Day 14 | Standards |
| Day15 | Formatted IOS |
| Day 16 | Data Type Casting |
| **Week5** | Day17 | Revision and problem discussion | Day 5 | Programming exercises on formatting input/output using  printf and scanf and their return type values. |
| Day 18 | **1st Sessional test** |
| Day 19 | **Unit 3: Control Structures** |
| Day 20 | Introduction |
| **Week 6** | Days 21 | Decision making with IF – statement | Day 6 | Programming exercises using if statement. |
| Days 22 | Revision and problem discussion |
| Days 23 | IF – Else |
| Day 24 | Nested IF |
| **Week 7** | Day25 | While loop | Day 7 | Programming exercises using if – Else. |
| Days 26 | do-while |
| Day27 | for loop |
| Day28 | Break. Continue statement |
| **Week 8** | Day29 | go to statement | Day 8 | Programming exercises on switch statement. |
| Day30 | switch statements |
| Day 31 | **Test Unit 3** |
|  | Day32 | **Unit 4: Pointers-**  **An Introduction** |  |  |

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| **Week 9** | Day33 | Introduction to Pointers | Day9 | File Check |
|  | Day 34 | Address operator and pointers |  |  |
| Day 35 | Revision and problem discussion |
| Day36 | Declaring and Initializing pointers |
| **Week 10** | Day 37 | Single pointer | Day 10 | Programming exercises on do – while, statement. |
| Day38 | Revision and problem discussion |
| Day39 | **2nd sessional test** |
| Day 40 | **Unit 5: Functions** |
| **Week 11** | Day 41 | **Introduction to functions** | Day 11 | Programming exercises on 'for' statement. |
| Day 42 | Global and Local Variables |
| Day 43 | Global and Local Variables |
| Day 44 | Revision and problem discussion |
| **Week 12** | Day 45 | Function Declaration | Day 12 | Programs on one-dimensional array. |
| Day 46 | Standard functions |
| Day 47 | Revision and problem discussion |
| Day 48 | **Parameters** |
| **Week 13** | Day 49 | Parameter Passing | Day 13 | Programs on two-dimensional array. |
| Day 50 | Parameter Passing |
| Day 51 | Revision and problem discussion |
| Day 52 | Call - by value/reference |
| **Week 14** | Day 53 | Call - by value/reference | Day 14 | 1. Programs for putting two strings together. 2. Programs for comparing two strings. |
| Day 54 | Revision and Problem discussion |
| Day 55 | **3rd Sessional Test** |
| Day 56 | Unit 6: Arrays, Single and  Multidimensional Array |
| **Week 15** | Day 57 | Introduction to Arrays, Array of characters, Passing an array to function | Day 15 | Simple programs using structures. |
| Day 58 | Array Declaration, Pointers to an array |
| Day 59 | Revision and problem discussion |
| Day 60 | Length of array |
| Day 64 | Arrays of characters |
| Day 68 | Revision and problem discussion |