**Code No.ES101CS**

**METHODIST COLLEGE OF ENGINEERING & TECHNOLOGY (An Autonomous Institution)**

**B.E. (CSE/AI&DS) I-Semester (Supplementary) Examination,September-2023**

**Subject: PROGRAMMING FOR PROBLEM SOLVING**

**Time: 3 hours Max.Marks:60**

**Note: Missing data, if any, maybe suitably assumed.**

**PART-A**

**Answer All the questions.**

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| **Q.No.** | **Questions** | **Marks** | **CO** | **BTL** |
| 1. a | What is main difference between variable and constant? | 2 | CO1 | L1 |
| b | Define pseudocode and give its importance with an example. | 2 | CO1 | L1 |
| C | State the advantage and limitation of arrays | 2 | CO2 | L1 |
| d | Outline the various methods of obtaining input in a character array | 2 | CO2 | L2 |
| e | What is linear search? | 2 | CO3 | L1 |
| f | What is binary search? | 2 | CO3 | L1 |
| g | State the comparison of union and structure. | 2 | CO4 | L2 |
| h | How to convert enum into a string? | 2 | CO4 | L2 |
| i | How to create and store information in a text file in C? | 2 | CO5 | L2 |
| j | Explain File Input/Output operations | 2 | CO5 | L2 |

**PTO**

**PART-B**

**Answer Any Five questions**.

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| Q.No. |  | Questions | Marks | CO | BTL |
| 2. | a | Define Algorithm and state the rules for writing an algorithm. | 4 | CO1 | L1 |
| b | Explain primary data types used in C? | 4 | CO1 | L2 |
| 3. | a | Write a program in C to read n number of values in an array and display it in reverse order without using string function | 4 | CO2 | L4 |
| b | Write a C program to find the sum of all odd number between 1 to n | 4 | CO2 | L4 |
| 4. | a | Explain the following terms briefly a) Function Definition b) Function Call | 4 | CO3 | L2 |
| b | Write a C program to find the factorial of a given number using recursion | 4 | CO3 | L4 |
| 5. | a | Differentiate between Array of structure and array of integer. | 4 | CO4 | L2 |
| b | Write a program for Passing Array of structure to function | 4 | CO4 | L4 |
| 6. | a | Illustrate about the file handling function with suitable example | 4 | CO5 | L2 |
| b | State and discuss about file operations in C | 4 | CO5 | L2 |
| 7. | a | Explain about arithmetic operators with examples | 4 | CO1 | L2 |
| b | Write the syntax of while and do while | 4 | CO2 | L1 |
| 8. | a | Write a c program to find whether the given no is Armstrong or not | 4 | CO3 | L4 |
| b | Explain What is meant by enum in C programming? | 4 | CO4 | L2 |
| 9. | a | Write the step-by-step procedure to search the given key using Binary Search method.(3,54,67,99,101,342,573,789) key=54 | 4 | CO5 | L3 |
| b | Discuss the significance of Preprocessor commands with example | 4 | CO5 | L1 |

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