**Internal Assessment (Assignment)**

**Course Code:** 23OMC103 **Last Date of Submission:** 04-Dec-2023

**Course Title:** Programming and Problem-Solving **Assignment Marks**: 30

**Assignment No.: 1**

**Note:**

1. The assignment has two parts: **A** and **B**.
2. Part A has ten MCQs carrying one mark each. Answer **ALL** ten MCQs.
3. Part B has eight descriptive questions carrying four marks each. Attempt **any** **FIVE** questions out of eight.

**Part A** **(10 1 = 10 Marks)**

Answer **all questions** **MCQ 1** to **MCQ 10**

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| **MCQ No.** | **Question** | | **Course Outcome** |
| **1** | What is the output of the following program?  int main()  {  int a=10,b=20,c=30;  printf("%d %d %d");  return 0;  } | | CO-1 |
| Answer Choices: | 1. Garbage Value 2. Compilation error 3. Run-time error 4. None of the options | |  |
| **2** | What is the output of the following program?  #include<stdio.h>  int main()  {  void \*ptr;  int num = 10;  ptr = &num;  printf("%d", ptr);  return 0;  } | | CO-1 |
| Answer Choices: | 1. 10 2. Address Value 3. 0 4. Compilation Error | |  |
| **3** | What is the output of the following program?  #include<stdio.h>  int main(){  int num = - -20;  printf("num = %d", num);  return 0;  } | | CO-1 |
| Answer Choices: | 1. -20 2. 0 3. 20 4. Compilation Error | |  |
| **4** | What will be the output of the C program?  #include<stdio.h>  int main()  {  float a = 5.0;  printf ("Result is = %d ", (24 / 5) \* a);  return 0;  } | | CO-1 |
| Answer Choices: | 1. 20 2. 1 3. 0 4. 25 | |  |
| **5** | What will be the output of the C program?  #include<stdio.h>  int main()  {  10;  printf("%d", 10);  } | | CO-1 |
| Answer Choices: | 1. 10 2. 20 3. Run-time error 4. Compile-time error | |  |
| **6** | | C Programming is a -------Programming style. | CO-1 |
| Answer Keys: | | 1. Bottom-up 2. Top-down 3. Object-oriented 4. Application |  |
| **7** | | What will be the output of the following C Program?  #include<stdio.h>  int main()  {  printf("%d",3 \* 2--);  } | CO-2 |
| Answer Keys: | | 1. 6 2. 3 3. Compiler Error 4. 9 |  |
| **8** | | What will be the output of the following C Program?  #include<stdio.h>  int main()  {  char \*ptr = "helloworld";  printf(ptr + 4);  return 0;  } | CO-1 |
| Answer Keys: | | 1. helloworld 2. oworld 3. Garbage Value 4. world |  |
| **9** | | The fastest loop in C programming is ------------------. | CO-1 |
| Answer Keys: | | 1. while 2. do-while 3. for 4. All the options |  |
| **10** | | What will be the output of the following program?  int main()  {  int a=25;  while(a <= 27)  {  printf("%d ", a);  a++;  }  return 0;  } | CO-1 |
| Answer Key | | 1. 27 27 27 2. 25 26 27 3. 25 25 26 4. 26 26 27 |  |

**Part B (5 4 = 20 Marks)**

Attempt **ANY FIVE** questions from Q 1 to Q 8.

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| **Q No.** | **Question** | **Course Outcome** |
| **1** | Explain the preprocessor directives used in the C program. | CO-1 |
| **2** | Illustrate for, while, and do-while loops with suitable examples. | CO-1 |
| **3** | Illustrate the nested if-else statement with an example. | CO-1 |
| **4** | Demonstrate a C program using call-by-value and call-by-reference methods. | CO-1 |
| **5** | What is the need for user-defined functions? Explain with an example. | CO-1 |
| **6** | Write a C program with functions to search for the largest number in an array. Print the position of the number. | CO-1 |
| **7** | Determine the number of vowels in an array of characters using a C program | CO-1 |
| **8** | Compare the following:   1. Global and local variables 2. Actual and Formal Parameters | CO-1 |

**Course Outcomes:**

1. Describe the fundamental concepts of computational thinking and problem-solving strategies. [L-1]
2. Demonstrate the use of arrays, strings, structures, and unions in the ‘C’ programming language. [L-3]
3. Demonstrate the use of re-useable code using functions in ‘C’. [L-3]
4. Describe and implement file handling mechanism in ‘C’ programs. [L-3]