

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/  
MANAGEMENT/COMMERCIAL PRACTICE, APRIL – 2020**

**PROGRAMMING IN C**

[Maximum Marks: 75]

[Time: 2.15 Hours]

**PART-A**

(Answer *any three* questions in one or two sentences. Each question carries 2 marks)

- I. 1. Write any two examples for keywords in C.  
2. Write the syntax of conditional operator.  
3. Define pointer.  
4. State how to declare an array.  
5. Write the name of a standard library function to copy a string. (3 x 2 = 6)

**PART-B**

(Answer any *four* of the following questions. Each question carries 6 marks)

- II 1. Differentiate variable and constants with example.  
2. Write a C program to check whether a number is positive, negative or zero.  
3. Explain call by value and call by reference with example.  
4. Define recursion and write a program to find the factorial of a number using recursion.  
5. Write a program to print the odd numbers present in an array.  
6. Explain how to declare and access 2-Dimensional array elements in a program.  
7. State the difference between array and structure. (4 x 6 = 24)

**PART-C**

(Answer *any of the three units* from the following. Each full question carries 15 marks)

**UNIT – I**

- III (a) Explain If, If-Else, Else-If-Ladder with syntax and example. (10)  
(b) Write a C program to check whether a given number is prime or not. (5)

**OR**

- IV (a) Explain the syntax of switch statement with an example. (8)  
(b) Write a C program to read a character and to check whether the character is vowel or consonant. (7)

## UNIT – II

- V (a) Explain function prototype and function call with the help of example. (7)  
(b) Write a C program to check whether the number is Armstrong or not using function. (8)

**OR**

- VI (a) Explain fundamental data types in C. (6)  
(b) Write a main program to read a number and find the sum of digits of a number with a function and print the result values in the main program. (9)

## UNIT- III

- VII (a) Write a C program to read an array with N elements and find the average of elements in an array. (6)  
(b) Write a C program to read an array with N elements to count the Even and Odd numbers in an array using function. (9)

**OR**

- VIII (a) Write a C program to find the sum of diagonal elements in an NxN matrix. (6)  
(b) Write a C program to find the sums of two matrices using function. (9)

## UNIT - IV

- IX (a) Explain string functions in C. (10)  
(b) Write a C program to find the length of the string. (5)

**OR**

- X (a) Explain how to declare, access the structure elements in C. (5)  
(b) Write C program to create structure student with data variables Reg\_no, Name and Marks of 3 subjects of 10 students and display their mark list with total mark. (10)

-----