TED (15/19) – 4044
(Revision – 2015/19)

A24-04194

Reg.No……..
Signature……...

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL – 2024

PROGRAMMING IN C

[Maximum Marks : 100] [Time : 3 hours]

PART – A
(Maximum Marks : 10)

Marks

I. Answer **all** questions in one or two sentences. Each question carries 2 marks.

1. List any 4 keywords in C.
2. Explain bitwise operator in C.
3. Give the syntax of do……while loop.
4. Describe gets and scanf to read a string variable.
5. Define recursion. (5x2=10)

PART – B
(Maximum Marks : 30)

II. Answer any **five** of the following questions. Each question carries 6 marks.

1. Explain two way and multi way selection structures.
2. Write a C program to print even numbers between 200 and 100, starting from 200 using for loop. (200, 198, 196, ……102, 100)
3. Explain how to declare a pointer variable and accessing the data using pointer.
4. Write a C program to read two string and concatenate it. Also find the length of the concatenated string using string function.
5. Differentiate between formal and actual variable with example.
6. Write a C function program to find the average of n numbers.
7. Write a C program to evaluate the roots of a Quadratic equation of the form $ax^2+bx+c=0$. where roots are $r1 = (-b + \sqrt{(b^2-4ac)})/2a$ and $r2 = (-b -\sqrt{(b^2-4ac)})/2a$

(5x6=30)

PART – C

(Maximum Marks : 60)

(Answer **one full** question from each unit. Each full question carries 15 marks)

UNIT – I

III. (a) Illustrate the structure of a C program with example. (10)

(b) Write a C program to check whether the given number is divisible by 5 or not. (5)

OR

IV. (a) Discuss any 5 data types in C with example. (10)

(b) Explain Conditional operator with example. (5)

UNIT – II

V. (a) Write a C program to sort 'n' numbers in ascending order. (10)

(b) Explain for loop with example. (5)

OR

VI. (a) Write a C program to find the transpose of a matrix. (10)

(b) Compare do……..while loop and while loop. (5)

UNIT –III

VII. (a) Write a C program to copy one string into another without using string function. (10)

(b) List any 5 benefits of using pointers. (5)

OR

VIII. (a) Write a C program using pointers to compute the sum of all elements stored in an array. (7)

(b) Explain any 4 string handling functions with example. (8)

UNIT – IV

IX. (a) Explain different types of user defined function based on argument present and return value send to the calling function. (10)

(b) Compare call by value and call by reference. (5)

OR

X. (a) Explain the general format of a function definition. (8)

(b) Write a function program to find the largest value in an array of **n** elements. (7)

****