

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2018

PROGRAMMING IN C

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

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

1. Name two formatted input/output functions.
2. What is the use of '\t' in C.
3. How many times "Welcome" is get printed ?

```
#include<stdio.h>
int main()
{
    int x;
    for (x = -1; x <= 10; x++)
    {
        if(x < 5)
            printf("Welcome");
    }
}
```

4. Name the function used to copy a string.
5. What is formal parameter ?

(5 × 2 = 10)

PART — B

(Maximum marks : 30)

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

1. Write a C program to read a number and check whether it is divisible by 5 or not.
2. Explain the use of 'nested if' with the help of an example.
3. Write a C program to read 10 numbers to an array and print it in reverse Order.
4. Explain an exit controlled loop.
5. Differentiate strcpy() and strncpy() functions with the help of example.
6. Define recursive function. Explain with the help of an example.
7. What is a global variable ? Illustrate with a suitable example.

(5 × 6 = 30)

PART — C

(Maximum marks : 60)

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

UNIT — I

- III (a) List the rules for defining variables. 5
- (b) Write a C program to read three sides a, b & c of a triangle. Check whether it is a valid triangle. If valid find the perimeter of the triangle.
[Hint : perimeter = a+b+c, for a valid triangle: length of a side < sum of other two sides.] 10

OR

- IV (a) What is the use of 'default' statement in switch(). 5
- (b) Write a C program and check whether a given character is a vowel or not. 10

UNIT — II

- V (a) Explain how to create a one dimensional array. 5
- (b) Write a C program to display the difference of largest and second largest numbers stored in an array of 10 integer numbers. 10

OR

- VI (a) What is a loop ? Why it is necessary in the program ? 5
- (b) Write a C program to merge two integer arrays. 10

UNIT — III

- VII (a) What is a string ? How it can be initialized ? Explain. 5
- (b) Write a C program to find the length of a given string including and excluding spaces using pointers. 10

OR

- VIII (a) Write a C program to read a string from keyboard and display it using character pointers. 6
- (b) Explain the syntaxes of strlen(), strdup(), strdupr() functions in C. 9

UNIT — IV

- IX (a) Explain the different ways to pass arguments to a function. 6
- (b) Write a C program to read sides of a rectangle. Find the area using a user - defined function. 9

OR

- X (a) What are the advantages of using user - defined functions. 6
- (b) Write a C Program to read a number. Calculate the sum of digits of the number using a user - defined function sumdigit() 9