

TED (15) – 4044

Reg. No.

(REVISION — 2015)

Signature

FOURTH SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY — APRIL, 2017

PROGRAMMING IN C

(Common for BM, EC and EL)

[Time : 3 hours

(Maximum marks : 100)

PART — A

(Maximum marks : 10)

Marks

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. Find the output of the following statements :

```
int Amount=4500;
(Amount%2000)?printf("No"):printf("Yes");
```

2. Tell the statement to create a two dimensional array to store the marks of 50 students in 5 subjects.

3. What is the output of the following program segment ?

```
char s[10]="Hello";
for(i=0;s[i]!='\0';i++);
printf("%d",i);
```

4. What is the use of actual parameters ?

5. Choose invalid variable names from the below list.

INT, case,case_1, case-2,3_case,4-case

(5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Write a C program to find the largest among three numbers.

2. Compare while loop and do while loop.

3. Explain any three string manipulation functions, their syntax and use.

4. Write a recursive function to find the factorial of a given number.

5. Write a C program to insert an element into an array.

6. Write a C program to perform addition, subtraction, multiplication and division of two numbers using pointers.

7. Write a user defined function that accepts two numbers X and Y as parameters and return X^Y .

(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) Explain the structure of a C program. 8
- (b) Write a C program to find the area of a triangle.
(Hint : $\text{Area} = \sqrt{S(S-a)(S-b)(S-c)}$, where $S = (a+b+c)/2$). 7

OR

- IV (a) Explain any four data types with example. 8
- (b) Write a C program to read the grade and print its equivalent grade point using switch statement. (Use the following table for the calculation of grade point)

<i>Grade</i>	<i>Grade point</i>	
S	10	
A	9	
B	8	
C	7	
D	6	
E	5	
F	0	7

UNIT — II

- V (a) Explain for loop with the help of an example. 8
- (b) Write a C program to find the transpose of a matrix. 7
- OR
- VI (a) Write a C program to find the reverse of a given number using do-while loop.
(Hint : Reverse of 123 is 321). 8
- (b) Explain creation, initialization and accessing of one dimensional array with example. 7

UNIT — III

- VII (a) Explain declaration of pointers, assigning values to pointers and accessing values using pointers with example. 8
- (b) Write a C program to compare two strings without using string functions. 7
- OR
- VIII (a) Write a program to find the sum and average of N numbers using pointer. 8
- (b) Explain how string variables are declared, initialized and stored with the help of examples. 7

UNIT — IV

- IX (a) Explain different types of user defined functions based on the arguments present and return value sends back to the calling function. 8
- (b) Write a C program to search for a given element in an array using pointer. 7
- OR
- X (a) Compare call by value and call by reference. 8
- (b) Write a C program to sort an array in ascending order using a user defined function. 7