TED (15) – 2131

(REVISION — 2015)

Reg. No.....

Signature .....

DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/COMMERCIAL PRACTICE — APRIL, 2019

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. "2a" cannot be used as variable name. Why ?
2. State the pre-processor command for the macro definition.
3. Write the subscript/index of the last element of the array declared as in a [10].
4. Define a string.
5. Write the name of a standard library function to find out the length of a string. (5×2 = 10)

PART — B

(Maximum marks : 30)

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

1. Explain any three each of the following with examples.

   (a) Arithmetic operators (b) Logical operators.
2. Write a C program to print the greatest number from given three numbers.
3. Compare call by value and call by reference parameter passing mechanisms.
4. Explain the recursion with the help of an example.
5. Write a C program to find sum of 'N' elements in an array.
6. Write a C program to count the number of positive and negative numbers in an array of "N" elements.
7. Describe how to declare an array of structure with an example. (5×6 = 30)

Marks

PART — C

(Maximum marks : 60)

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

UNIT — I

III (a) What are the essential difference between while and do ... while statements with its syntax. 6

(b) Write a C program to find out the number of digits in a given number. 9

OR

IV (a) Explain the syntax of switch statement with an example. 6

(b) Write a C program to generate Fibonacci series n terms. (eg: 0, 1, 1, 2, 3, 5, 8, 13, etc.) 9

UNIT — II

V (a) Explain the different fundamental data types in C. 6

(b) Write a program to reverse a given number using a function. 9

OR

VI (a) Distinguish between static and automatic variables. 6

(b) Write a main program to read two numbers, interchange its values with a function and print the interchanged values of variables in the main program. 9

UNIT — III

VII (a) Describe about pointer and arrays with example. 6

(b) Write a C program to store n elements in an array and sort them in ascending order. 9

OR

VIII (a) Explain array of pointers with an example. 6

(b) Write a program to find out the sum of main diagonal and antidiagonal elements of an MxN matrix. 9

UNIT — IV

IX (a) Explain the declaration of two dimensional array of characters and its one application. 6

(b) Explain the standard library functions-strcpy(), strcmp() and strcat() with examples. 9

OR

X (a) Write a program using an array of structure to read consumer number, name, unit consumed of KSEB consumers and print the consumer number, name, unit consumed and charge of each consumers (charge = unit consumed * rate; rate = 2 Rs/unit if unit consumed is less than 500 other wise 7 Rs/unit.) 9

(b) Explain the declaration of a structure and accessing structure elements with an example. 6