

TED (15) – 2131

Reg. No. ....

(REVISION — 2015)

Signature .....

SECOND SEMESTER DIPLOMA EXAMINATION IN  
ENGINEERING/TECHNOLOGY — MARCH, 2016

**PROGRAMMING IN C**

(Common to CT, -CHE and IF)

[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. List two fundamental data types.
2. State the need of **type** declaration instruction.
3. Define scope of a variable.
4. Write the syntax of declaring a two dimensional integer array.
5. Define string.

(5×2 = 10)

**PART— B**

(Maximum marks : 30)

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

1. List the rules for constructing variable names in C.
2. Compare **while** and **do..... while** looping statements.
3. Write a function that receives 3 integers and return the largest among them.
4. Explain **register** and **external** storage classes in C.
5. Write a C program to search an element in an array.
6. Write a C program to find sum of diagonal elements of a matrix.
7. Compare **array** and **structure** with examples.

(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 different forms of **if** statements and nesting of **if-else** statement with examples. 9

(b) Write a C program to find the sum of digits of a number. 6

OR

IV (a) Explain the **for** loop and nesting of for loop with examples. 9

(b) With an example explain goto statement. 6

UNIT — II

V (a) Explain steps involved in adding functions to an existing library with example. 9

(b) Explain about function declaration and prototype. 6

OR

VI (a) Explain recursion with an example program. 9

(b) Explain macros with arguments. 6

UNIT — III

VII (a) Write a program to add a matrix with its transpose. 9

Hint :—  $B = A + A^T$

(b) Explain about **pointers** and **arrays**. 6

OR

VIII (a) Explain the method of passing two dimensional array to a function. 9

(b) Write a C program to find the sum of elements in an array. 6

UNIT — IV

IX (a) Describe the method to declare a structure. Write a sample code to access the elements of a structure. 9

(b) Write a C program to check whether a string is palindrome or not.

(Hint :— palindrome means given string and its reverse are same) 6

OR

X (a) Describe the different string functions with examples. 9

(b) Explain about two dimensional **array of characters**. 6