

**SECOND SEMESTER DIPLOMA EXAMINATION IN
ENGINEERING/TECHNOLOGY — APRIL, 2017**

PROGRAMMING IN C

(Common to CT, CM 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. Explain why 'enum' cannot be used as variable name.
2. State the preprocessor command for the macro definition.
3. Differentiate $(*p)+1$ and $*(p+1)$
4. Identify valid variable names from the below list.
FLOAT, No_1, No-2,3_No
5. Write the standard library string function to concatenate two strings.

(5×2 = 10)

PART— B

(Maximum marks : 30)

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

1. Explain the rules used in the implicit conversion of floating point and integer values. Give examples.
2. Explain the mechanism used to return a value from a called function to the caller.
3. Explain passing array elements to a function with example.
4. Write a user defined function to find the length of a string without using library function.
5. Write a function to swap two integer numbers using pointers as arguments.
6. Write a function to check whether a given name is present in an array.
7. Write a C statement block to read an array of N integers and find the largest element in the array.

(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 precedence of arithmetic operators with the help of an example. 7
 (b) Explain relational and logical operators. 8

OR

- IV (a) Compare if-else and switch statements.
 (b) Given grade point and its equivalent grade.

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

- (i) Write C statements using if-else to find the grade. 4
 (ii) Write C statements using switch to find the grade. 4

UNIT — II

- V (a) Distinguish static and automatic variables. 8
 (b) Explain external variables. 7

OR

- VI (a) Explain macros. 8
 (b) Explain inclusion of one file into another. 7

UNIT — III

- VII (a) Explain passing array elements to a function. Give example. 7
 (b) Write a function to add the elements of two integer arrays. 8

OR

- VIII (a) Illustrate array of pointers with the help of an example. 8
 (b) Demonstrate passing an entire array to a function. 7

UNIT — IV

- IX (a) Explain the advantages of using array of pointers for storing strings with the help of suitable examples. 8
 (b) Write a user defined function to find the reverse of a string.
 (Do not use standard library string function to find the reverse) 7

OR

- X (a) Explain array of structures with the help of an example. 8
 (b) Write a C statement block to declare a structure with Book No., Name, Author and Price, store data to the structure and display the stored details. 7