A22-04208

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Reg.No.....
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/ MANAGEMENT/ COMMERCIAL PRACTICE - APRIL - 2022

PROGRAMMING IN C

[Maximum marks: 100] (Time: 3 Hours)

PART – A

(Maximum Marks: 10)

Marks

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

1. Show how a single line and multi-line comments can be included in a C program.
2. Give two examples for derived data types.
3. Give the syntax of a one dimensional array declaration.
4. List any two built-in library functions along with their purpose.
5. List the two different forms of return statement. (5 x 2 = 10)

PART – B

(Maximum Marks: 30)

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

1. Make note on operator precedence in C.
2. Differentiate between nested if-else and else if ladder structures in C.
3. Explain how a 2-dimensional array can be read in from the keyboard.
4. Illustrate the 'while' looping structure with an example.
5. Explain how the value of a variable can be accessed through pointer using an example.
6. What are user defined functions? Illustrate how a user defined function can be included in a program.
7. Differentiate between call by value' and call by reference' methods of passing parameters to a function. (5 x 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 type of constants supported by C language. (8)

(b) Write a C program to get the time in seconds as integer (interactively through key board) as input and convert it into hours: minutes: seconds. For example, an input 3845 seconds should get expressed as 1 hour: 4 minutes: 5 seconds. (7)

OR

IV. (a) Which are the arithmetic, relational and logical operators in C? Illustrate each with example. (8)

(b) Write a C program to find the largest of three numbers. The numbers are to be obtained interactively through the keyboard. (7)

UNIT-II

V. (a) Write C program to illustrate element deletion and searching an element as applied to a one-dimensional array. (8)

(b) Give the syntax of while and do...while loop. Illustrate with suitable examples. (7)

OR

VI. (a) Write a C program to get to matrices through keyboard and multiply them. (8)

(b) Write a C program that sorts a given 1-dimensional array with N elements in ascending order. Get the array interactively through the keyboard. (7)

UNIT-III

VII. (a) Illustrate the methods of reading a string using (a) scanf (b) getchar (c) gets functions. (8)

(b) Write a C program to read a 10 element array and print the array elements along with their addresses on screen. (7)

OR

VIII. (a) Write a C program to check whether a given string is Palindrome or not without using built-in library functions for comparison. (8)

(b) Write a C program to swap two given numbers using pointers. (7)

UNIT-IV

IX. (a) List and explain the types of functions in C based on the number of arguments passed and return values. (8)

(b) Write a C program to swap values of two variables, through user defined function using the method of call be reference. (7)

OR

X. (a) Explain the concept of function recursion along with an appropriate example. (8)

(b) Write a C program to sort an array of integers in ascending order using function. (7)
