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Reg.No.....
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, APRIL- 2023

PROGRAMMING IN C

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

PART – A
Maximum marks : 10

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

1. Write the syntax of conditional operator in C.
2. What is meant by recursion?
3. Define pointer.
4. Write example to initialize an one dimensional integer array in C.
5. Define string. (5 x 2 = 10)

PART – B
Maximum marks : 30

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

1. Illustrate the use of switch statement with syntax and example.
2. Describe storage classes in C with example.
3. Differentiate macros and functions.
4. Write a C program to find the sum and average of 20 integer numbers.
5. Compare one dimensional and two dimensional arrays with example.
6. Discuss about array of structures.
7. Write a C program to reverse a string without using string handling 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 logical and relational operators in C. (7)

(b) The marks obtained by a student in 3 different subjects are input through the keyboard. The student gets a division as per the following conditions:
Percentage above or equal to 80 – Distinction; Percentage between 60 and 79 – First class; Percentage between 50 and 59 – Second class; Percentage between 40 and 49 – Third class; Percentage below 40- Failed.
Write a C program to calculate the division obtained by the student (Hint:- Maximum mark for each subject is 100, Percentage =(sum of marks in three subjects/3) (8)

OR

IV.(a) Explain for loop and while loop in C with example. (7)

(b) Write a C program to input a five digit number and reverse the number. (8)

UNIT-II

V.(a) Explain various data types in C with examples. (7)

(b) Write a C program to input two numbers and swap these numbers using an user defined function (Hint if a=5, b=6 the output is a=6, b=5) (8)

OR

VI. (a) Explain the different ways to pass arguments to a function with examples. (7)

(b) Write a C program to find the factorial of a number using recursion. (8)

UNIT-III

VII. (a) Explain how to pass a two dimensional array to a function with example. (7)

(b) Write a C program to find the sum of two MxN matrices. (8)

OR

VIII.(a) Write a C program to input n numbers in to a single dimensional array. Find the largest number in the array and print its position. (7)

(b) Explain how to pass array elements to a function with example. (8)

UNIT-IV

IX. (a) Explain the following string handling functions with example

(i) strlen() (ii) strcat() (iii) strcmp() (6)

(b) Write a C program to read N customers into a structure having members-Account number, customer name and balance. Display the formatted details of the customers. (9)

OR

X. (a) Explain how to declare and access structure elements in C with example. (6)

(b) Write a C program to concatenate two strings without using string handling function. (9)

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