24225

3 Hours / 70 Marks   Seat No.

Instructions :
(1) All Questions are *compulsory.*
(2) Answer each next main Question on a new page.
(3) Illustrate your answers with neat sketches wherever necessary.
(4) Assume suitable data, if necessary.
(5) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

1. Attempt any FIVE of the following :   **10**

(a) List any four relational operators.

(b) Write syntax of if else statement.

(c) State the use of '&' and '*' operators used in pointers.

(d) Write use of break statement.

(e) Write two advantages of arrays.

(f) Define the term function.

(g) Write two features of structures.

2. Attempt any THREE of the following :   **12**

(a) State various data types in C along with their memory size.

(b) Write a C program to check the number entered is positive or negative and display the message accordingly.

(c) Describe declaration and initialization of two dimensional array with suitable example.

(d) Describe pointer arithmetic with any two operations.

3.   **Attempt any THREE of the following :**   12

    (a)   Write a program to display hexadecimal, decimal, octal and binary format of entered number.

    (b)   Compare while and do while loop. (Write any 4 points)

    (c)   Differentiate between call by value and call by reference. (4 points)

    (d)   Explain declaration of structure with example.

4.   **Attempt any THREE of the following :**   12

    (a)   Explain the meaning of the following with reference to pointer :

         int var = 50;

         int * p^1 = *P^2;

         P_1 = & var;

         $P_2 = P_1$;

    (b)   Write a structure DATE having members day, month, year and assign initial values to that structure.

    (c)   Write a program to add two numbers using function.

    (d)   State the use of %d and %f. Also write example with printf statement to show use of mentioned format specifiers.

    (e)   Explain strlen ( ) and strcpy ( ) function with example.

5.   **Attempt any TWO of the following :**   12

    (a)   Write a C program to find the largest of three numbers using nested if else.

    (b)   Write a C program to display fibonacci series using recursion.

    (c)   Write a C program to accept two strings from user. Display length of both the strings. Also concantenate two strings and display the output.

6.   **Attempt any TWO of the following :**   12

    (a)   Write a program to add two matrices of 3 * 3 size.

    (b)   Describe a structure book having elements as book_number, book_title, book_price and also declare array of structure taking input of 10 books using C programming language.

    (c)   Write a C program using pointers to swap the value of two integers numbers.

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