

22374

24225

3 Hours / 70 Marks

Seat No.

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- 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) Figures to the right indicate full marks.
(5) Assume suitable data, if necessary.
(6) Use of Non-programmable Electronic Pocket Calculator is permissible.
(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any FIVE of the following :** **10**
- a) State the use of continue statement.
 - b) Explain formatted Input and output statements.
 - c) Give the syntax of if -- else statement.
 - d) Define two dimensional array with example.
 - e) Explain pointer declaration with example.
 - f) What is the task of preprocessors in C?
 - g) Explain types of preprocessors directives in C.

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- a) Declare structure “student” having data member as rollno, name and percentage. Accept this data for three structure variable and display accepted data. Write a program for it.
 - b) Explain any two logical operators with example
 - c) Write ‘C’ program for displaying smaller and greater number in an given array.
 - d) Write a C program for calculating area and perimeter of a circle.
- 3. Attempt any THREE of the following :** **12**
- a) Explain recursion with suitable example.
 - b) Explain any four string library function in C with example.
 - c) Write a C program to generate multiplication table of given number.
 - d) List different pointer arithmetic operations with suitable example.
 - e) Distinguish between macros and function.
- 4. Attempt any THREE of the following :** **12**
- a) State the use of increment and decrement operators.
 - b) Distinguish between call by value and call by reference.
 - c) Write a C program to take input number any reverse it by using while loop.
 - d) Explain concept of array of characters with example.

- e) The following is segment of a program :

```
void main
{
int a, b, * P1, * P2, x, y;
a = 10;
b = 5;
P1 = &a;
P2 = &b;
x = * P1 * * P2 - 6;
y = * P1 * P2 + 10;
Printf ("a = %d, b = %d", a, b);
Printf ("x = %d, y = %d", x, y);
}
```

What will be the output of program?

5. Attempt any TWO of the following :

12

- Write a program to declare structure library having data members book_id, book_name, auth_name and price. Accept data of three books and display it.
- Write a program for checking whether the given string is palindrome or not.
- Write a program to print following pattern.

```
1
2  2
3  3  3
4  4  4  4
5  5  5  5  5
```

6. Attempt any TWO of the following :

12

- a) Write a program for multiplication of two 3×3 matrices.
 - b) Write a C program to sum of all the odd numbers between 1 to 20 using do-while loop.
 - c) List different categories of function and explain with example
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