

22226

11920

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) 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) Define array. List its type.
- (b) Draw & label different symbols used in flowcharts.
- (c) Find the output of the following program :

```
# include < stdio.h>
void main( )
{
    int x = 10, y = 10, v1, v2 ;
    v1 = x++ ;
    v2 = ++y ;
    printf ("value of v1:%d", v1) ;
    printf ("value of v2:%d", v2) ;
}
```
- (d) State the syntax & use of `strlen ()` & `strcat ()` function.
- (e) State the Relational operators with example.
- (f) State the syntax to declare pointer variable with example.
- (g) Draw flow chart for addition of two numbers.

[1 of 2]

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- (a) State the importance of flow chart.
 - (b) Write a program to declare structure student having rollno, name & marks. Accept & display data for 3 students.
 - (c) Explain pointer arithmetic with example.
 - (d) Explain nested if-else with example.
- 3. Attempt any THREE of the following :** **12**
- (a) Describe the following terms :
 - (i) Keyword
 - (ii) Identifier
 - (iii) Variable
 - (iv) Constant
 - (b) Differentiate between call by value and call by reference.
 - (c) Explain conditional operator with example.
 - (d) List the categories of functions and explain any one with example.
- 4. Attempt any THREE of the following :** **12**
- (a) Write an algorithm to determine the given number is odd or even.
 - (b) Illustrate the use of break and continue statement with example.
 - (c) Write a program to add, subtract, multiply and divide two numbers, accepted from user using switch case.
 - (d) Illustrate initialization of two dimensional array with example.
 - (e) Write a program to read two strings and find whether they are equal or not.
- 5. Attempt any TWO of the following :** **12**
- (a) Write a program to calculate sum of all the odd numbers between 1 to 20.
 - (b) Write a program for addition of two 3×3 matrices.
 - (c) Write a program to compute the sum of all elements stored in an array using pointers.
- 6. Attempt any TWO of the following :** **12**
- (a) Write a program to sort elements of an array in ascending order.
 - (b) Write a function to print Fibonacci series starting from 0, 1.
 - (c) Calculate factorial of a number using recursion.
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