

22226

23242

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) Draw flowchart for addition of two numbers.
  - b) List any four keywords used in 'C'.
  - c) Explain Else If ladder with flowchart.
  - d) Define array. List it's types.
  - e) State the recursive functions.
  - f) Define pointer. Write syntax for pointer deleration.
  - g) Draw any two symbols used to construct flow chart. Also state their use.
2. **Attempt any THREE of the following.** **12**
- a) Write an algorithm to find the sum of numbers from 1 to N.
  - b) Explain nested if-else statement with example.
  - c) Differentiate between character array and integer array with respect to size and initialisation.
  - d) Explain pointer arithmetic with example.

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

- a) Describe the following terms:
  - i) Keyword
  - ii) Identifier
  - iii) Variable
  - iv) Constant
- b) Explain parameter passing with respect to call by value and call by reference.
- c) Describe scanf( ) function with its syntax and 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 whether a given number is prime.
- b) Write a program to convert temperature in fahrenheit degree to centigrade degrees.
- c) Write a C program to print following pattern using for loop

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1
2 3
4 5 6
7 8 9 10
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- d) Write a program to accept ten numbers in an array. Sort array elements and display it.
- e) Develop a program to find the factorial of a number using recursion.

- 5. Attempt any TWO of the following. 12**
- a) Write a program to print fibonacci series of n terms starting from 0 and 1. (Accept value of n from user)
  - b) Write a program for addition of two  $3 \times 3$  matrices.
  - c) Write a program to find largest number from an array using pointer
- 6. Attempt any TWO of the following. 12**
- a) Write a C program to declare structure employee having data member name, age, designation and salary. Accept and display information of three employee.
  - b) Write a program to demonstrate use of strcmp ( ), strcpy ( ), strlen ( ), strcat ( ).
  - c) Write a c program using pointer to read an array of characters and print them in reverse order.
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