

21819

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
  - (6) Preferably, write the answers in sequential order.

- |   | <b>Marks</b> |
|---|--------------|
| <b>1. Attempt any FIVE of the following :</b>   | <b>10</b>    |
| <ol style="list-style-type: none"> <li>(a) List any four relational operators with their use.</li> <li>(b) Give syntax of switch-case statement.</li> <li>(c) Give syntax of for loop.</li> <li>(d) State any two differences between call by value and call by reference.</li> <li>(e) Define pointer and state any two uses of pointer.</li> <li>(f) State the use of ★, *, &amp; symbols used in pointers.</li> <li>(g) Define structure.</li> </ol> |              |
| <b>2. Attempt any THREE :</b>   | <b>12</b>    |
| <ol style="list-style-type: none"> <li>(a) Explain any four datatypes used in C with example.</li> <li>(b) Explain nested if-else statement with syntax and example.</li> <li>(c) Explain Array. State two advantages of array.</li> <li>(d) List any 2 string functions. Give syntax and use of each function.</li> </ol>  |              |
| <b>3. Attempt any THREE of the following :</b>  | <b>12</b>    |
| <ol style="list-style-type: none"> <li>(a) Enlist any four bitwise operators used in C and give example of each.</li> <li>(b) Explain Pointer Arithmetic.</li> <li>(c) Explain meaning of following statement with reference to pointer :<br/> int var = 50;<br/> int *p1, *p2;<br/> P1 = &amp; var;<br/> P2 = p1;</li> <li>(d) Explain declaration of structure with example.</li> </ol>   |              |

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

- (a) Write a C program to accept two integer numbers from user and print the result of addition and subtraction.
- (b) Write a C program to check whether given number is positive or negative and display message accordingly.
- (c) What is an output of following C code :

```
# include <stdio.h>
void main( )
{
    int a[5] = {10, 20, 30, 40, 50};
    printf("output");
    for (i = 0; i<3; i++)
    {
        Printf("%d", a[i];
    }
}
```

- (d) Declare 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.

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

- (a) Explain if-else statement using syntax and example.
- (b) Write a C program to read string from keyboard and find whether it is palindrome or not.
- (c) Write a program to find length of a string.

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

- (a) Write a program to add two  $3 \times 3$  matrices.
  - (b) Write a program to add two numbers using function.
  - (c) Write a C program to create structure for student having data members like roll\_no. name and marks in 3 subjects and display % of marks as output of program.
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