

```

{ int d, i, a[10] { 1, 2, 3, 4, 5, ..., 10 }, search;
for ( i = 0 ; i <= 9 ; i++ )
{ printf ( "Enter search element" ); (CC - 2)
scanf ( "%d", &search ); }
if ( search == a[i] )
{ printf ( "In found" );
else printf ( "In not found" ); } }

```

2022

Time : 3 hours

Full Marks : 50

Pass Marks :  $22\frac{1}{2}$

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from **all** the Sections as directed.

### Section - A

1. Choose the correct answer from the given options : 1×5 = 5

(a) What will be the maximum size of a float variable ?

- |               |              |
|---------------|--------------|
| (i) 1 byte    | (ii) 2 bytes |
| (iii) 4 bytes | (iv) 8 bytes |

(b) The operator & is used for :

- |                   |                 |
|-------------------|-----------------|
| (i) Bitwise AND   | (ii) Bitwise OR |
| (iii) Logical AND | (iv) Logical OR |



(c) Which of the following is a ternary operator ?

- ☒ (i) ?                      (ii) \*  
(iii) sizeof              (iv) ^

(d) An Ampersand before the name of a variable denotes :

- (i) Actual Value              (ii) Variable Name  
☒ (iii) Address              (iv) Data Type

☒ (e) Which of these is not a valid parameter passing method in C ?

- ☒ (i) Call by value              (ii) Call by reference  
☒ (iii) Call by pointer              (iv) All of these

2. Fill in the blanks :

$$1 \times 5 = 5$$

(a) Character constants should be enclosed between single quote.

☒ (b) Array subscripts in C always start at \_\_\_\_\_.

(c) Maximum number of elements in the array declaration `int a [5][8]` is 40.

☒ (d) The process of translating a source program into machine language is a function of \_\_\_\_\_.



(e) The answer of :  $7\%3$  is 1.

### Section - B

Answer any four questions of the following :

$$3 \times 4 = 12$$

3. Describe switch-case statement with example.
4. What is pointer ? Write a C program to swap two numbers using pointer.
5. Describe fseek () and ftell () functions in C.
6. What are various types of datatypes available in C language ?
7. What is recursion ? What are its advantages and disadvantages ?
8. What are the arithmetic operators that are permitted on pointers ?  $+$   $-$   $*$   $/$   $++$   
 $\%$   $-$

### Section - C

Answer any four questions of the following :

$$7 \times 4 = 28$$

9. Describe various types of bitwise operators in C language with examples.



10. Write a program to calculate salary of an employee, given his basic pay (to be entered by the user), HRA = 10% of the basic pay, TA = 5% of basic pay. Define HRA and TA as constants and use them to calculate the salary of the employee.
11. Write a C program to transpose a  $3 \times 3$  matrix.
12. Write a program to copy the contents of one file into another.
13. Write a program to search an element in an array containing ten elements.
14. Write short notes on the following :
  - (a) Increment and Decrement operators
  - (b) Conditional Operator      AND OR NOT.

P	q	$P \& q$	$P   q$	$P \wedge q$
0	0	0	0	0
0	1	0	1	1
1	0	1	1	0
1	1	1	1	1

IJ-18/2 (600)      D      (4)      1      PUBV(S-1) — BCA  
(CC-2)