

**First Semester B.C.A. Degree Examination,
October/November 2019**

(CBCS Scheme)

Computer Science

PROGRAMMING CONCEPTS USING C

Time : 3 Hours]

[Max. Marks : 90

Instructions to Candidates : Answers ALL Sections.

SECTION – A

Answer any **TEN** questions :

(10 × 1 = 10)

1. Define flowchart.
2. What is algorithm?
3. Differentiate between % and /?
4. What is constant?
5. Mention the input and output statements in C.
6. Which is the multiple branching statement in C?
7. Define an array.
8. Mention any two built in string functions.
9. What is meant by structure?
10. What is pointer?
11. What is file?
12. What is the output of the following program segment :

```
{
Sum = 0 ;
for (i = 1 ; i <= 5 ; i++) ;
    sum = sum + i ;
}
```

SECTION - B

Answer any **FIVE** questions :

(5 × 3 = 15)

13. Write a flow chart to find the area of triangle area = $\frac{1}{2} bh$.
14. Write an algorithm to find simple interest $SI = \frac{PTR}{100}$.
15. What is meant by hierarchy of operations? Explain with an example.
16. Explain simple if statement with an example.
17. What are jumping statements? Explain.
18. Write a C program for the given below :
1
1 2
1 2 3
1 2 3 4
19. Write a program to find the length of a string.

SECTION - C

Answer any **SIX** questions :

(6 × 5 = 30)

20. Explain the basic structure of C program.
21. Name the rules for writing identifiers in C. Give two valid and two invalid examples.
22. Explain switch statement with an example.
23. Write a C program to arrange the 'n' numbers in ascending order using bubble sort.
24. What is recursion? Illustrate with a programming example.
25. Write a program to generate and print first 'n' Fibonacci number.
26. Write a C program to illustrate the call by value and call by reference.
27. Write a note on storage classes in C.

SECTION D

Answer any **FIVE** questions :

(5 × 7 = 35)

28. What are control structure? Explain.
29. What is user defined function? Explain different types of user defined functions.
30. (a) Write any two advantages of pointers. (2)
(b) Write a C program for student structure. The structure contains Reg-no, name and marks. (5)
31. Write short notes on : (2 + 2 + 1 + 2)
(a) fopen statement
(b) fprintf statement
(c) fclose statement
(d) fscanf statement.
32. Write a C program to check whether the given matrix is identity (or) not.
33. (a) How to declare single dimensional array? (2)
(b) Write a C program for linear search. (5)
34. Explain the following modes of opening a file. (7)
(a) w
(b) r
(c) a
(d) w+
(e) r+
(f) a+
(g) rw+
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