



K. Sambath

Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD)
Re-accredited with 'A++' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination - November 2024

I Semester

Class : I UG / 2023 Batch
Major : Computer Science

Time : 3 Hours
Max. Marks : 100

23BCSC01 Programming Methodology

Course Outcomes:

- CO1: Obtain knowledge to design algorithms and draw flowcharts to solve a problem.
- CO2: Develop problem solving skills coupled with top-down design principles.
- CO3: Acquire knowledge to implement different Operations on arrays.
- CO4: Trained skill to solve problems through programming for simple applications.
- CO5: Understand the use of Arrays, functions, pointers, structures and unions.

Part A

10 x 1 = 10

Choose the Correct Answer

1. Values changed during the execution time is declared as _____ CO1K1
a. constant b. volatile
c. symbolic Constant d. enumeration
2. Who developed C Programming? CO1K1
a. Dennis Ritche b. Martin Ritche
c. Ken Ritche d. Deniel Ritche
3. Which of the following functions is used to read a single character from the keyboard in C? CO2K1
a. printf() b. scanf()
c. getchar() d. puts()
4. Combining two strings together is known as _____ CO2K1
a. merge b. copy
c. concatenate d. combine
5. Pointer variables can be used in _____ CO3K1
a. identifiers b. expression
c. keywords d. constants
6. The maximum number of dimension, an array can have in C is CO3K1
a. 3 b. 4
c. 5 d. Compiler dependent
7. Which of the following is the correct way to declare a pointer to an integer? CO4K1
a. int ptr; b. int *ptr;
c. pointer int ptr; d. int & ptr;
8. What will be the result of the following code segment? CO4K1

```
int a = 5;
int *p = &a;
*p = 10;
printf("%d", a);
```


a. 5 b. 15 c. 100 d. 10
9. What is the correct way to close a file in C? CO5K1
a. endfile(f); b. fileclose(f);
c. fclose(f); d. close(f);
10. Which of the following is not an application of binary search? CO5K1
a. To search in unordered list
b. Debugging
c. Union of intervals
d. To find the lower/upper bound in an ordered sequence

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 11.a. Enumerate the difference between "for" and "while" loops. CO1K2
(or)
- 11.b. Sketch the different symbols of Flowchart and their functions. CO1K2
- 12.a. Explain the concept of Top down approach. CO2K2
(or)
- 12.b. Differentiate call by value and call by reference. CO2K2
- 13.a. How will you return a value from a function, explain with an example? CO3K3
(or)
- 13.b. Compare the difference between one dimensional and two dimensional arrays. CO3K3
- 14.a. Explain about arrays of structure and arrays within structure. CO4K3
(or)
- 14.b. Write a program in C to extract a substring from a given string. CO4K3
- 15.a. Illustrate the concept of Binary search algorithm. CO5K2
(or)
- 15.b. Explain the procedure to search an element using Linear search. CO5K2

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

- 16.a. Classify different types of programming methodologies? CO1K2
(or)
- 16.b. Demonstrate the control flow of nested if statements with example. CO1K2
- 17.a. Does C support function overloading? Justify your answer. CO2K3
(or)
- 17.b. Write a recursive function to count the number of digits in a given integer. CO2K3
- 18.a. Write a C Program to find the maximum number in an array. CO3K3
(or)
- 18.b. Explain about defining and declaring the structure variable. CO3K3
- 19.a. Describe the different string library functions with example coding. CO4K2
(or)
- 19.b. How will you define, initialize and access union members? CO4K2
- 20.a. Write a C program to create a File, Write in it and Close the file. CO5K3
(or)
- 20.b. Elaborate the input/output operation on files with example. CO5K3
