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 (now MoE)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641043, Tamil Nadu, India

Bachelor's Degree Examination – November 2025
I Semester

Class : I UG / 2023 Batch **Time : 3 Hours**
Major : Computer Science **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 kills 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. Which symbol is used for a decision in a flowchart?
a. Rectangle b. Circle c. Diamond d. Oval CO1 K1

2. In C, which of the following is used to declare a variable?
a. input b. int c. read d. scanf CO1 K2

3 The parameters passed to a function are called _____
a. Return values b. Arguments c. Constants d. Pointers CO2 K1

4. Functions with the same name but different arguments are called ____
a. Recursion b. Polymorphic
c. Overloaded d. Inline CO2 K2

5. Which of the following is the correct syntax to declare an array? CO3 K3
a. int arr(5); b. int arr[5];
c. array int arr[5]; d. declare arr[5];

6. What is the correct way to declare a pointer to a structure? CO3 K2
a. struct *ptr; b. struct ptr;
c. struct ptr; d. pointer struct;

7. What is the output of strlen("hello")?
a. 6 b. 5 c. 4 d. 0 CO4 K2

8. To read a string with spaces, we use _____
a. scanf b. gets c. printf d. putchar CO4 K1

9. Which search algorithm compares elements linearly? CO5 K2
a. Binary search b. Linear search
c. Hash search d. Indexed search

10. Which function is used to open a file in C?
a. fopen() b. open()
c. fileopen() d. create() CO5 K1

Part B — 5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a.	Examine the characteristics of programming.	CO1 K1
	(or)	
11.b.	Describe the basic program structure in C language.	CO1 K2
12.a.	Illustrate theuse of predefined functions with example.	CO2 K3
	(or)	
12.b.	Summarize the functions with default arguments.	CO2 K2
13.a.	Explain the declaration and referring arrays with example.	CO3 K3
	(or)	
13.b.	Distinguish between the structures and functions.	CO3 K4
14.a.	Evaluate the reading and writing strings in C program.	CO4 K5
	(or)	
14.b.	Point out the standard string library functions with example.	CO4 K4
15.a.	Appraise the algorithm for linear search.	CO5 K5
	(or)	
15.b.	Express the merging and copying files in file handling.	CO5 K6

Part C — 5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a.	Enumerate the stages in program development.	CO1 K1
	(or)	
16.b.	Demonstrate the different types of programming methodologies.	CO1 K2
17.a.	Discover the basic concept of function overloading with example.	CO2 K3
	(or)	
17.b.	Compare and constart the call-by-value and call-by-reference.	CO2 K2
18.a.	Explain the use of arrays in functions.	CO3 K3
	(or)	
18.b.	Describe the declaration and initializing of multi-dimensional arrays.	CO3 K4
19.a.	Assess the implementation of arrays of structures.	CO4 K5
	(or)	
19.b.	Express the arrays of strings with syntax and example.	CO4 K5
20.a.	Construct the procedure for binary search with example.	CO5 K4
	(or)	
20.b.	Explain the use of files for data input and output.	CO5 K4

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