

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 - 641 043, Tamil Nadu, India

Bachelor's Degree Arrear Examination – May 2025 I Semester

Batch : 2022 Arrear

Time: 3 Hours

Major : Computer Application

Max. Marks: 100

21BCAC02 Problem Solving using C

Course Outcomes:

CO1: Understands programming methodologies by learning algorithm and flowcharts.

CO2: Obtain knowledge about the fundamentals of C programming.

CO3: Implement different Operations on arrays.


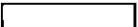

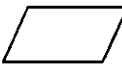
CO4: Understand use of functions, pointers, structures and unions.

CO5: Gain knowledge about the basics of file handling mechanism.

Part A

10 x 1 = 10

Choose the correct answer

- The symbol used for decision in input is _____. CO1K3
 a.  b.  c.  d. 
- The brain of the computer is _____. CO1K4
 a. CPU b. MPU c. RAM d. GPU
- Who invented C language? CO2K4
 a. Charles Babbage b. Dennis Ritchie c. Steve Jobs d. Grahambel
- Identify the valid variable among the following. CO2K3
 a. 5xyz b. #xyz c. x yz d. xyz
- An array index starts with _____. CO3K2
 a. -1 b. 1 c. 0 d. 2
- Which of the following is used as a string termination character? CO3K3
 a. 0 b. \0 c. /0 d. \n
- The function call should be given _____. CO4K1
 a. above the user-defined function b. above the main function
 c. inside the main function d. No need to declare
- What is the size of a C union? CO4K3
 a. C union is always 128 bytes
 b. Size of C union is the total bytes of all elements of structure
 c. Size of C union is the size of largest element
 d. It takes the size of integer members
- Select a function which is used to write a string into a file? CO5K3
 a. pits() b. putc() c. fputs() d. fgets()
- What does argc and argv indicate in command-line arguments? CO5K2
 a. argument count, argument variable
 b. argument count, argument vector
 c. argument control, argument variable
 d. argument control, argument vector

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 11.a. What is problem solving? Write the steps involved in problem solving using computers and the problem solving tools. CO1K1
(or)
- 11.b. What is meant by a Pseudocode? Write the advantages and disadvantages of Pseudocode. CO1K2
- 12.a. Explain the different operators and expressions in C. CO2K2
(or)
- 12.b. Discuss the data types available in C. CO2K3
- 13.a. Write a program using one dimensional array to find whether a string is palindrome or not. CO3K2
(or)
- 13.b. Discuss on string functions in C with examples. CO3K4
- 14.a. What are the two types of function? Write about user defined function declaration, call and definition. CO4K1
(or)
- 14.b. Write the differences between structure and union. CO4K2
- 15.a. Write a C program on pointers to function. CO5K2
(or)
- 15.b. Discuss command line arguments with example. CO5K4

Part C

5 x 12 =60

Answer ALL questions

Each answer should not exceed 800 words or four pages

- 16.a. Write on the components of a computer with neat diagram. CO1K3
(or)
- 16.b. What is an algorithm? Write its characteristics, advantages and disadvantages. Write an algorithm for adding two numbers and draw the flowchart for the same. CO1K4
- 17.a. Discuss the structure of C program with an example program. CO2K2
(or)
- 17.b. Explain control statements in C with suitable example. CO2K4
- 18.a. Write a program to find transpose of a matrix. CO3K3
(or)
- 18.b. Write on array-its declaration, initialization, advantages and the types of array. CO3K2
- 19.a. Explain in detail the categories of function definition. CO4K3
(or)
- 19.b. Write a program to find cube of a number using nesting of functions. CO4K4
- 20.a. What is a pointer and how it is declared? Write a program performing arithmetic operations using pointers. CO5K3
(or)
- 20.b. What is file in C? Explain the input and output operations performed on file in detail. CO5K2
