



School of Computer Science Engineering (SCOPE)
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2024-2025

SLOT: B1

Programme Name & Branch : B.Tech & CSE
Course Code and Course Name : BCSE102L & Structured and Object-Oriented Programming
Faculty Name(s) : VIMALA DEVI K, VINILA JINNY, VISWANATHAN A, BERLIN M A, JASMIN T, JOSE, RAJARAJAN G, KANAGARAJ R, MUCHENEDI HARI KISHOR, GOUTAM MAJUMDER, ARUMUGA ARUN R, RANJITHKUMAR S, JAYACHANDRAN J.
Class Number(s) : VL2024250501460, VL2024250501471, VL2024250501482, VL2024250501486, VL2024250501500, VL2024250501505, VL2024250501522, VL2024250501556, VL2024250501564, VL2024250501579, VL2024250501590, VL2024250501596
Date of Examination : 28.01.2025
Exam Duration : 90 minutes
Maximum Marks: 50

General instruction(s):

- Answer All Questions
- M- Max mark; CO - Course Outcome; BL - Blooms Taxonomy;
- Level (1 - Remember, 2 - Understand, 3 - Apply, 4 - Analyse, 5 - Evaluate, 6 - Create)
- CO1: Understand different programming language constructs and decision-making statements;
- manipulate data as a group.
- CO2: Recognize the application of modular programming approach; create user defined data types and idealize the role of pointers.
- Include all necessary header files.
- Every C-program must have a main() function. This is where the program execution begins.

Q. No	Question	M	CO	BL
1.	a. Explain the concept of type conversion in C-programming language. Discuss the difference between implicit and explicit type conversion. Provide examples of how incorrect type conversion can lead to unexpected results or errors.	6	1	2
	b. Illustrate a C program that uses an unconditional jump to skip a certain portion of code and proceed to the end of the program.	4	1	2
2.	Imagine you're developing a cryptographic module for secure communication. A module that does the following <ul style="list-style-type: none"> • Prime number Check: By efficiently checking whether the number is prime or not. • Binary representation for key generation: If a number passes the primality check, its binary representation to be done which is crucial for various cryptographic operations. <i>Hint: Print binary version of a number if it is prime</i>	10	1	3
3.	Consider a scenario in a customer support system for an e-commerce platform. The system tracks customer reviews and checks if the review text is a palindrome. If the review text is a palindrome, the system highlights it as a "unique" review; otherwise, it stores the reversed text for further analysis to generate insights on user feedback patterns.	10	2	3
4.	Describe the concept of recursive functions and provide an example of determining GCD of two numbers to illustrate how recursion works.	10	2	2
	Imagine a scenario where the teacher wants to store the scores of multiple quizzes for each student. This must be achieved by using a 2D array and pointers to navigate through it. The C-program could then calculate the average score for each student and the highest-scoring student.	10	2	3
