



VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

REG.NO.:

SCHOOL OF ELECTRONICS ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2025-2026

SLOT: B2

Programme Name & Branch : B.Tech. ECE
 Course Code and Course Name : BECE320E – Embedded C Programming
 Faculty Name(s) : Prof. Vidhyapathi CM + 5 faculties
 Class Number(s) : VL2025260500845, 0847, 0849, 0851, 0852
 Date of Examination : 28-01-2026
 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 - Apply the C programming language for various data types and decision making applications.
- CO2 – Apply the knowledge of derived data types, pointers, and functions in C to write a program

Q. No	Question	M	CO	BL
1.	Apply your knowledge of C programming to determine the output of the following code snippets when executed. They are part of a valid C program, including the necessary headers and the main() function. (2.5 Marks each)			
	(i) <pre>int i = 1; i = 2/i++ + 2 * i++; printf("%d", i);</pre> (ii) <pre>int a = 2, b = 7, c = 10; c = a == b; printf("%d", c);</pre>	10	1	3
	(iii) <pre>int d, a = 1, b = 2; d = a++ + ++b; printf("d=%d, a=%d, b=%d\n", d, a, b);</pre> (iv) <pre>int x = 10, y = 20, z = 30; int a = x < y && y < z; printf("%d", a);</pre>			
2.	Identify and correct the errors in the following C programs. Rewrite the programs after making the necessary corrections without changing given logic. (5 Marks each)			
	(i) <pre>// The following program displays // whether the given number is // Palindrome or not #include <stdio.h> int main() { int n, temp, rev; printf("Enter a number: "); scanf("%d", &n); while (n != 0) { rev = rev * 10 + (n % 10); n = n / 10; } if (temp != rev);</pre>	10	1	3
	(ii) <pre>// The following program find out // whether the given number is prime // or not #include <stdio.h> int main() { int num1, count, i; printf("Enter a number: "); scanf("%d", &num1); for(i=1, i<num1, i++) { if(num1%i==0) count = count + 1;</pre>			

$$r = r * 10 + n \% 10$$

$$10 + 2 = 12$$

$$12 * 10 + 0 = 120$$

$$120 + 2 = 122$$

$$122 * 10 + 0 = 1220$$

$$1220 + 2 = 1222$$

$$1222 * 10 + 0 = 12220$$

$$12220 + 2 = 12222$$



VIT

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

REG.NO.:

SCHOOL OF ELECTRONICS ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2025-2026

SLOT: B2

	<pre>printf("Palindrome Number"); else printf("Not a Palindrome"); return 0; }</pre>	<pre>if(count>2) { printf("%d is not a PRIME number ", num1); } } if(count<=2); printf("%d is a PRIME number ", num1); return 0; }</pre>			
3.	Create a program to simulate the working of a vending machine. The program will accept the total amount of money entered by the user and calculate the number of notes to dispense based on standard currency with minimum number of notes. (e.g., ₹500, ₹100, ₹50, ₹10, ₹5). Sample input: 5465 Expected output: ₹500 – 10 note(s) ; ₹100 - 4 note(s) ; ₹50 – 1 note(s) ; ₹10 – 1 note(s) ; ₹5- 1 note(s)		10	1	3
4.	Write a C program to get an array of minimum 6 integer numbers from the user and find the difference between the largest and smallest number in the array.		10	1	3
5.	Write a C program to find the number of words in the given string and also find the length of the string excluding spaces. The string must be user defined. Sample : Input : Str[]=" Welcome to C Programming" Output: No. of words: 4, length of the string: 21		10	2	3

Handwritten calculations and notes:

71.1
71.2
71.3
71.4
71.5
71.6
71.7

51.1
51.2
51.3
51.4
51.5

101.1 → 0
101.2 → 0
101.3 → 1
101.4 →
101.5 → 0

Handwritten numbers: 0, 1, 3, 7, 123, 30+2, 32, 30+0, 50, 3025