

**VIT**Vellore Institute of Technology
(Approved by AICTE, New Delhi)

REG.NO.: 21BEC0523

SCHOOL OF ELECTRONICS ENGINEERING
CONTINUOUS ASSESSMENT TEST - I
WINTER SEMESTER 2024-2025

SLOT: C2

Programme Name & Branch : B.Tech. ECE
Course Code and Course Name : BECE320E - Embedded C Programming
Faculty Name(s) : Prof. Srinivasa Rao I + 5 faculty
Class Number(s) : VL2024250500683, 0686, 0691, 0693, 0695, 0697
Date of Examination : 29-01-2025
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 - 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 Marks each)			
	(i) <code>int a = 10, b = ++a, c = a++; int d = b + c + a; printf(" %d %d %d ", b, c, d);</code> (ii) <code>char a = 10; short int b = 50; printf(" %d, %d, %d ", sizeof(a), sizeof(b), sizeof(a+b));</code> (iii) <code>for(int i=1; i<5; i++); { printf(" %d", i); }</code>			
	(iv) <code>int a = 10, b = 20; printf(" %d", a > b ? a : b);</code> (v) <code>printf("\n ab"); printf("\b si"); printf("%5d", 10);</code>	10	1	3
2.	Identify and correct the errors in the following C programs. Rewrite the programs after making the necessary corrections without changing the given logic. (5 Marks each)			
	(i). //The following program display first //N Fibonacci numbers #include <stdio.h> int main(); { int n, num1=1, num2=0, sum, i;			
	(ii). //The following program extracts even //numbers and create a separate array #include <studio.h> int main() { int A1[3] = {10, 12, 1, 3, 8}, i, j = 0, A2[4];	10	1	3



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	<pre>printf("Enter a number : "); scanf("%d", &n); for(i=1;i<=n,i++) { printf("%d ", &num1); num1=num2; num2=sum; sum=num1+num2; } return 0;</pre>	<pre>for(i=0;i<4;i++) { if(A1[i]/2==0) { A2[i]=A1[i]; i++; } } for(int i=0;i<j;i++) printf("%d ", A2[i]); return 0 }</pre>			
3.	Develop a C program to read any month number in integer and display the name of the month in words and number of days for that month by using switch-case statement. Test case - Input : 6 Expected output : June - No. of days 30		10	1	3
4.	Design a C program to generate an arrow-shaped pattern using for loop, where the pattern is aligned to the left, forming a shape similar to the right half pyramid pattern. Test case - Input : No. of rows: 5 Expected output : <pre> # ## ### #### ##### \$\$\$\$\$ \$\$\$\$ \$\$\$ \$\$ \$</pre>		10	1	3
5.	Construct a C program to find out the second largest and second smallest element in an array (Array elements should be taken from user input). Test case - Input : {3,7,9,2,8,4} Output : 2nd Largest element - 8 2nd Smallest element - 3		10	2	3
