



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 - 1
Fall SEMESTER 2055-2056

Slot: E2+TE2

Programme Name & Branch	: M. Tech (Embedded Systems)	
Course Code and Course Name	: MAEDS503 – Embedded Programming	
Faculty Name(s)	: Dr. Shanmugasundaram M	
Class Number(s)	: VL2025260105659	
Date of Examination	: 21/8/25	
Exam Duration	: 90 minutes	Maximum Marks: 50

General instruction(s):

CO1. Apply the fundamental concepts of C programming and data structures to solve basic computational problems.

Answer ALL Questions

Q. No	Question	M	CO	BL
1.	Analyze the following codes. (i) <pre>#include<stdio.h> int main(){ double num=5.2; int var=5; printf("%d\t",sizeof(!num)); printf("%d\t",sizeof(var=15/2)); printf("%d",var); return 0; }</pre> (ii) <pre>#include <stdio.h> int main(){ int a, b=5, c= 1, d=4, e=2; a=b++ - ++c *d/e; printf("%d", a); return 0; }</pre> (iii) <pre>#include<stdio.h> int main(){ int i=5, j; j=++i ++i ++i; printf("%d %d", i, j); return 0; }</pre> (iv) <pre>#include<stdio.h> int fun(int i){ return (i++); } int main() {</pre> <i>Handwritten notes for (i):</i> !num = 0 sizeof(!num) = 4 var = 15/2 = 7.5 → not executed var = 5 printf("%d", var) = 5 <i>Handwritten notes for (ii):</i> 5 - 2 * 4/2 = 1 <i>Handwritten notes for (iii):</i> Syntax error Space & undeclared concealed based compile i = 5 j = 6 + 7 + 8 = 21 <i>Handwritten notes for (iv):</i> post-increment 10 is returned	10	1	3



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	<pre>int fun(int) , i = fun(10); i=0 printf("%d\n", --i); => -10 -9 return 0; }</pre>			
2.	(i) Write a C program with a flowchart for displaying the following pattern given below <pre> 1 2 3 2 3 4 5 4 3 4 5 6 7 6 5 4 5 6 7 8 9 8 7 6 5 </pre>	5	1	3
	(ii) Write a C program to display the Armstrong numbers between two intervals.	5		
3.	(i). Write a C program for the given scenario. Get three integer values from the user. Do the cyclic swapping among those three numbers using call by reference without using the fourth variable? Example: Get three integers from the user in a,b,c. Swap the value from a to b, b to c, and c to a.	5	1	2
	(ii). Write a c program, which asks the user to enter five names, stores them in an array, and then prints the names along with their lengths using functional call.	5		
4.	Write a C program to Find the Second Biggest element in the list of 10 elements using passing array to function concepts.	5	1	3
5.	Write a C program with flow chart to find the presence of an element in a list of array pointers. Input: 11, 22, 33, 44, 55, 66, 77, 88, 99 Element to be searched: 77	10	1	3
