

Reg.No.:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 50046

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. / FEB. 2025

First Semester

Computer Science and Engineering

U19CS101 – PROGRAMMING FOR PROBLEM SOLVING

(Common to All)

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels	K1 – Remembering	K3 – Applying	K5 - Evaluating
(KL)	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Mention the need for flowchart.	2	K1	CO1
2.	Differentiate between compiler and interpreter.	2	K1	CO1
3.	Why C language is more popular for around 50 years?	2	K1	CO2
4.	Solve the expression :12/8 +8 * 2.	2	K3	CO2
5.	What is the purpose of using arrays in a program?	2	K1	CO3
6.	Write a program to read and display the elements using 1-D array.	2	K2	CO3
7.	Write a program for defining & accessing a function.	2	K2	CO4
8.	Enlist storage classes in c.	2	K1	CO4
9.	Differentiate between arrays and structures.	2	K2	CO5
10.	State the purpose of bit field.	2	K1	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain the basic building blocks of a computer with neat sketch.	13	K2	CO1
	(OR)			
b)	Explain the different symbols used for flow chart and draw the flowchart for finding the greatest of three numbers.	13	K2	CO1
12. a)	Enlighten different types of operators and expressions with examples.	13	K2	CO2
	(OR)			
b) i.	Explain in detail about variables and constants with suitable examples.	8	K3	CO2
ii.	Write a C Program which takes p,t,r as input and compute the simple interest and display the result.	5		
13. a)	Elaborate the initialization and usage of various dimensions of arrays with an example program for each.	13	K2	CO3
	(OR)			
b)	Discuss about pointer arithmetic operations with necessary examples.	13	K2	CO3
14. a)	Illustrate functions using call by value and call by reference method with suitable examples.	13	K2	CO4
	(OR)			
b)	Explain the following string handling functions with an example.	13	K2	CO4
	i. String concatenation			
	ii. Finding the position of a substring in a string.			
15. a)	Elucidate the difference between unions and structures with necessary example programs.	13	K2	CO5
	(OR)			
b)	Write about the following	13	K2	CO5
	i. Nested structures			
	ii. Array of structures			

PART – C

(1 x 15 = 15 Marks)

- | Q.No. | Questions | Marks | KL | CO |
|--------|--|-------|----|-----|
| 16. a) | Model flowchart and device Pseudocode for the given scenario:
Accept the name and marks obtained by a student in Computer Project. Display the grades as per the table given below: | 15 | K3 | CO1 |

Marks obtained	grade
80% and more	A
60% and more but less than 80%	B
40% and more but less than 60%	C
less than 40	Fail

(OR)

- | | | | | |
|----|---|----|----|-----|
| b) | Describe decision making and branching statements with proper syntax and examples. Provide a real application by applying branching statements with proper justification. | 15 | K2 | CO2 |
|----|---|----|----|-----|