Hall Ticket Number:

Code No. : 13164 N

VASAVI COLLEGE OF ENGINEERING *(AUTONOMOUS)*, HYDERABAD

Accredited by NAAC with A++ Grade

B.E. (Civil Engg.) III-Semester Main Examinations, Jan./Feb.-2024

Programming for Civil Engineering

Time: **3 hours** Max. Marks: **60**

*Note: Answer all questions from **Part-A** and any **FIVE** from **Part-B***

Part-A (10 × 2 = 20 Marks)

Q. No.	Stem of the question	M	L	CO	PO
1.	If originally X=3 and Y=5, what is the value of X and Y after each of the following expression. a. (X++) +(Y) b. ++X c. (X++) + (Y++) d. (X--) – (++X)	2	2	1	1
2.	Evaluate the following expression: 2+5*(6+ 1.2-3*(12/6*3.2)-16)*3-(6-4/2)	2	2	1	1
3.	Write the syntax of while loop with an example	2	1	2	1

4.	What is the output of the following code segment?
	for(int i=0; i<10; i++)
	if(i == 3)
	break;
	else
	printf("%d",i);
		2	2	2	1,5

5.	Write a C program to declare, initialize, input elements in array and print array.	2	1	3	1,5

6.	What is the output of the following code segment?
	#include <stdio.h>
	void main()
	{
	int a[2][3] = {1, 2, 3, 4, 5};
	int i = 0, j = 0;
	for (i = 0; i < 2; i++)
	for (j = 0; j < 3; j++)
	printf("%d", a[i][j]);
	}
		2	2	3	1

7.	What are the arithmetic operations possible in pointers?	2	1	4	1,5
8.	Write the syntax of the library function for string reverse. Give an example.	2	1	4	1,5
9.	Differentiate between structure and union. What is the advantage of structure over array?	2	1	5	1
10.	What are the file opening modes in C? Specify the syntax with an example.	2	1	5	1

Contd... 2

Code No. : 13164 N

	Part-B (5 × 8 = 40 Marks)				
11. a)	What are the different types of computer languages? List examples of each type.	4	2	1	1
b)	Convert the following numbers given in one number system to another number system. i) $(86)_{10}$= ( ) 2 ii) $(129.58)_{10}$= ( ) 8 iii) $(175)_8$ = ( ) 16 iv) $(78.625)_{10}$ = ( )2 v) $(3A73)_{16}$ = ( )10	4	3	1	2
12. a)	Write a C program to swap two given numbers without using temporary variable and also by using temporary variable.	4	3	2	1,2,5
b)	Write program for finding factorial of a number using recursive functions	4	3	2	1,2
13. a)	How is linear search technique different from a binary search technique? Explain with an example	4	1	3	1,2
b)	Given two matrices of size 3*3 as input, Write a program to add the two matrices and display the result.	4	3	3	1,2
14. a)	Write a C function that reads a string of lower case letters with maximum length 20 by reading one character at a time and then print the string in upper case without using built in functions.	4	3	4	1,2
b)	Define pointer. Explain how pointers help in inter-function communication.	4	2	4	1,5
15. a)	Define file. Write short notes on standard library character input output functions.	4	2	5	1,5
b)	Write a C program to store the list of customer names, their Pancard number and their telephone numbers in a structure and display them.	4	3	5	1,5
16. a)	Draw a flowchart and write an algorithm to find the biggest of given three numbers	4	2	1	1
b)	Write a program to print the following Pascals triangle. 1 1 1 1 2 1 1 3 3 1 1 4 6 4 1	4	3	2	1,2
17.	Answer any ***two*** of the following:				
a)	Program for bubble sort	4	3	3	1,2,5
b)	String library functions	4	2	4	1
c)	Pre processor directives	4	2	5	1

M : Marks; L: Bloom's Taxonomy Level; CO; Course Outcome; PO: Programme Outcome

i)	Blooms Taxonomy Level – 1	20%
ii)	Blooms Taxonomy Level – 2	40%
iii)	Blooms Taxonomy Level – 3 & 4	40%

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