Reg. No.

B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2023

First Semester

CS22151 – PROGRAMMING IN C

(Common to ME & MN)

(Regulation2022)

TIME: 3 HOURS   **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Apply various problem-solving techniques and represent solutions to problems in the form of algorithms and flow charts.	2
CO 2	Write C programs using the control statements of C language for simple scientific problems	3
CO 3	Develop programs by using the advantages of array and string operations to solve problems.	4
CO 4	Create user-defined functions, structures and unions to perform a task.	4
CO 5	Use pointers to address memory and file operations to store and retrieve data	4

PART- A(20x2=40Marks)

(Answer all Questions)

		CO	RBT LEVEL
1.	Application Software cannot run without the presence of System Software. Justify it.	1	2
2.	Convert 10110_2 into decimal and octal numbers.	1	2
3.	What is the function of the switch in the Network?	1	2
4.	What type of data transmission mode takes place in Walkie-Talkie? Why?	1	2
5.	Write a program to calculate area and perimeter of circle using constants.	2	3
6.	Differentiate post-increment with pre-increment operator with an example.	2	4
7.	Convert alphabets into its ASCII value	2	3
8.	Differentiate the looping statement 'for' and 'while'.	2	4
9.	Why is it necessary to give the size of an array in an array declaration?	3	2
10.	How do you accept a multi word input in C Language?	3	2
11.	Write a C program to accept and print your name.	3	3
12.	Can you use one dimensional array to store the names of a student in a class? Justify your answer.	3	4
13.	List the steps involved in a user-defined function call	4	2
14.	When you need to create to structure data type?	4	2
15.	Write a recursive function to search an element in array.	4	2
16.	Why we don't use the '&' symbol, while reading a string through scanf( )?	4	4
17.	Find the errors in the following C program	5	4

```
#include <stdio.h>
void main()
{
int x=7;
float *p = &x;
printf("%d",p);
return 0;
}
```

		CO	RBT LEVEL
18.	List the possible functions to read/write from/into a file	5	2

			Marks	CO	RBT LEVEL
19.	How will you access the variable through double pointer?			5	3
20.	Differentiate the sequential and random access of a file			5	4

PART- B (5x 10=50Marks)

			Marks	CO	RBT LEVEL
21. (a)	(i)	Draw the flowchart to find the factorial of a number.	(5)	1	2
	(ii)	Write a pseudocode to calculate the average of first 'n'numbers	(5)	1	2
		(OR)			
(b)		Explain the various Network topologies.	(10)	1	2
22. (a)		Develop a C program to generate the numbers that appear in the Fibonacci series up to N terms.	(10)	2	3
		(OR)			
(b)	(i)	Write a C program to print the numbers divisible by 5 but not by 2 in the range 1 to 100.	(5)	2	3
	(ii)	Write a C program to check whether a person is eligible for voting or not.	(5)	2	3
23. (a)		Write a program to get n numbers and print the sum of the odd and even numbers present in the array.	(10)	3	3
		(OR)			
(b)		Using built-in functions, perform the following operations on strings: a. Compare two strings and print equal or not. b. Get the input of two strings and concatenate them. c. Get the input of a string and reverse the string d. Get the input of the string and find the first occurrence of a character e. Get the input of string and convert to uppercase character	(10)	3	3
24. (a)		Explain the concept Pass by Value and Pass by Reference with suitable programs.	(10)	4	3
		(OR)			
(b)		Write a program to display days of a week using Enumeration.	(10)	4	3
25. (a)	(i)	Construct a program to display the number and the address where the number is stored using pointers	(5)	5	3
	(ii)	Swap three numbers using pointers.	(5)	5	3
		(OR)			
(b)		Develop a C program to copy the contents of one file to another and also find the number of characters in the file.	(10)	5	3

PART- C(1x 10=10Marks)
(Q.No.26 is compulsory)

		Marks	CO	RBT LEVEL
26.	Using Structures write a C program to read and print the details <Name, Aadhar, Gender, Birthday> of a person such that the element Birthday is a nested component type DOB. (Hint: Use structure)	(10)	4	5