

Reg. No.

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B.E. / B. TECH DEGREE EXAMINATIONS, MAY 2023
 First Semester
IT22251- COMPUTER PROGRAMMING AND PRACTICE
(Common to AE, BT, CE, CH)
(Regulation 2022)

TIME: 1 HOUR 30 MINUTES

MAX. MARKS: 50

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Understand the model of a computer, software design methodologies, and represent solutions to computational problems as algorithms.	3
CO 2	Analyze the problem scenarios and develop C programs using sequential, conditional, and iterative constructs.	4
CO 3	Appraise problem scenarios and develop C programs using complex storage structures.	4
CO-4	Design modularized solutions for larger problems.	3
CO-5	Inspect the storage structure in a computer and design C programs to access permanent storage.	4

PART- A (10 x 2 = 20 Marks)
 (Answer all Questions)

	CO	RBT LEVEL
1. List the components of a computer.	1	2
2. Label the following softwares as Application software OR System software: Linux Operating System, Assembler, Microsoft Word, Compiler, Gmail	1	2
3. Write a switch construct to print MALE, FEMALE, or TRANSGENDER if the expression is 1, 0, otherwise.	2	2
4. Given int x = 6; Write four different expressions to increment the value of x to 7.	2	2
5. Write a statement in C to initialize an array to store the marks of 10 students in a subject using values of your choice.	3	3
6. Your name is "Computer". Sketch how your name is stored in memory as a string.	3	2
7. Label the return type, function name, parameters, and function body in the below function. void display (float x, int y) { } }	4	3
8. Label the functions with the header files under which they are defined scanf(), printf(), strlen(), strrev(), exit(), malloc().	4	3
9. Write a macro statement to calculate the square of a number.	5	3

10. Write the C program statement to open a file named “Poem.txt” to add contents to the file. 5 3

PART- B (2 x 10 = 20 Marks)

		Marks	CO	RBT LEVEL
11. (a)	(i) Draw a flowchart to calculate the average of marks scored by a student in five subjects.	(5)	1	3
	(ii) Write a C program to print the sum of factors of a number.	(5)	2	3
(OR)				
(b)	(i) Write a pseudo-code to check if a number is positive or negative or zero.	(5)	1	3
	(ii) Write a C program that reads a number between 1 and 7 and prints the corresponding day of a week using switch statement.	(5)	2	3
12. (a)	(i) Write a C program using recursive functions to calculate the factorial of a number	(5)	4	3
	(ii) Consider the file named “test.txt”. Write the C statements to open the file to read, append, and erase the contents.	(5)	5	3
(OR)				
(b)	(i) Write a C program to perform addition and multiplication of three numbers using user0-defined functions	(5)	4	3
	(ii) Write a C program to demonstrate the concepts of pointer declaration, initialization, and arithmetic.	(5)	5	3

PART- C (1 x 10 = 10 Marks)

(Q.No.13 is compulsory)

		Marks	CO	RBT LEVEL
13.	You wish to find the student who scored maximum in your class in Biology. Your class may have N students. Develop an application C program to read the marks and find the maximum. Show the flow of the program for the input instance [21,62,33,87,95,87] with N = 6	(10)	3	4
