Sub Code: BCST201 ROLL NO......

## SEMESTER EXAMINATION, 2022 – 23 Year, Ist yr B.Tech. –Common to all Programming for Problem Solving

Duration: 3:00 hrs Max Marks: 100

Note: - Attempt all questions. All Questions carry equal marks. In case of any ambiguity or missing data, the same may be assumed and state the assumption made in the answer.

Q 1.	Answer any four parts of the following.	5x4=20
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	a) Draw the block diagram of a digital computer. Explain the function of the various Components.	
	b) Explain the 3-D array with example.	
	c) What is structure? Explain with suitable example?	
	d) Write a program in C for to print your name in 100 times using for loop.	
	e) How we can declare a variable in C programming?	
	f) What is string? Explain with suitable example?	
Q 2.	Answer any four parts of the following.	5x4=20
	a) Explain the differences between while loop and do-while loop.	
	b) Explain the static and dynamic memory allocation.	
	c) Write a program in C to find out greatest among three numbers using if-else statement.	
	d) What is function? How many types of functions are used in programming	
	e) What is operator? And explain its types.	
	f) What is pointer? Explain with a program.	
Q 3.	Answer any two parts of the following.	10x2 = 20
	a) What is Union? Write a program in C for union.	
	b) Write an algorithm for Selection Sort.	
	c) Write a program in C to check entered number by user is prime or not.	
Q 4.	Answer any two parts of the following.	10x2 = 20
	a) How pointers are declared and used in C Programming language? Write the various applications of pointers.	
	b) Explain in detail about the storage classes used in C Programming language.	
	c) How can we use pointer to access the elements of the structure? Write an example code to show this.	
Q 5.	Answer any two parts of the following.	10x2 = 20
	a) Write function code in C to show call by value and call by reference mechanism of argument passing. Also elaborate the functions in your words.	
	b) Discuss the jump statement in C with the help of suitable examples.	
	c) Why and where is nested looping used? What are the problems arises when nested looping is used?	

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