18CS001

Hall Ticket Number:

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II/IV B.Tech (Regular / Supplementary) DEGREE EXAMINATION

November, 2020 — **Common to CS/EE/IT/EI**

Second Semester — **Problem Solving with Programming**

Time: Three Hours — **Maximum:** 50 Marks

Answer ALL Questions from PART-A. (1X10 = 10 Marks)

Answer ANY FOUR questions from PART-B. (4X10=40 Marks)

PART-A

1.	a)	Differentiate = and == with suitable examples.	CO1	
	b)	Write any three rules for constructing identifiers.	CO1	
	c)	Differentiate compiler and interpreter.	CO1	
	d)	Write the statement for declaring an array "natural numbers" and initialize it with first 5 natural numbers.	CO2	
	e)	What is the use of NULL character in strings?	CO5	
	f)	Define Pointer.	CO5	
	g)	Differentiate between call by value and call by reference	CO4	
	h)	What is the use of agrc and argv[] in passing parameters in command line arguments.	CO5	
	i)	Name any three pre-processor directives.	CO1	
	j)	Give the purpose of fseek() and ftell().	CO5	

PART-B

2.	a)	What is the data type? Explain basic data types and their sizes in bytes, format specifies with suitable examples.	CO1	5M
	b)	Write a C-program to find maximum of three numbers using conditional operator.	CO1	5M
3.	a)	Explain in detail about if-else, nested if-else statements with suitable example programs.	CO3	6M
	b)	Write a menu driven program to perform arithmetic operations.	CO3	4M
4.	a)	Explain in detail about *while* and *for* loop structures with example programs.	CO3	6M
	b)	Write a C-program to sort a list of names using arrays.	CO5	4M
5.	a)	Explain in detail about one dimensional and two dimensional arrays with suitable programs.	CO5	6M
	b)	Write a C-program to find image of a given number.	CO3	4M
6.	a)	Explain about pointer, its declaration, initialization, and write a C-program to swap two variables by using pointers.	CO5	6M
	b)	Write a C-program to find factorial of given number using recursion.	CO3	4M
7.	a)	Discuss about various kinds of user defined functions with suitable examples.	CO3	6M
	b)	Write a C-program to read three student details (Name, Roll No, and percentage) and display the student details using structures.	CO5	4M
8.	a)	Explain about #define pre-processor directive with an example program.	CO5	5M
	b)	Explain about command line arguments with example program.	CO5	5M
9.	a)	Explain about malloc() and calloc() functions in detail with suitable example programs.	CO4	6M
	b)	Write a C-program to copy the contents from one file to another file.	CO5	4M