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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Second Semester B.Tech Degree (R, S) Examination May 2024 (2019 Scheme)

Course Code: EST 102

Course Name: PROGRAMMING IN C (Common to all programs)

Max. Marks: 100 Duration: 3 Hours

PART A

Answer all Questions. Each question carries 3 Marks Marks

1		Compare low level language and high level language with example.	(3)
2		Differentiate between primary memory and secondary memory.	(3)
3		Explain various datatypes used in C programming language.	(3)
4		Write a C program to find the sum of digits of a given number.	(3)
5		Write a C program to find average marks obtained by a class of 50 students in a test.	(3)
6		Explain different ways of initializing a 2D array with example.	(3)
7		Compare formal parameters and actual parameters with an example.	(3)
8		Differentiate between structure and union with an example.	(3)
9		Explain call by reference in C with an example.	(3)
10		Explain different modes of opening a file in C.	(3)

PART B

Answer any one full Question from each module. Each question carries 14 Marks

11	*a.*	Explain the basics of computer architecture with the help of a diagram.	(9)
	b.	Draw a flow chart to find the largest of three numbers.	(5)

OR

12		Illustrate bubble sort with an example. Write the algorithm and pseudocode for sorting an array of n numbers using bubble sort.	(14)
13	*a*	Explain the different types of arithmetic, relational and logical operators used in C.	(7)
	b.	Write a C program to implement basic arithmetic operations of a calculator using switch constructs.	(7)

OR

14	*a.*	Differentiate between break and continue with an example for each.	(7)

	b.	Write a C program to check whether the given number is prime or not.	(7)
15	*a.*	Write a C program to count the number of occurrences of a given number in an array of n numbers.	(7)
	b.	Write a C program to concatenate two strings without using built in string functions.	(7)

OR

16	*a.*	Write a C program to find the sum of two matrices.	(7)
	b.	Write a C program to find the length of a given string without using built in string functions.	(7)
17	*a.*	Write a C program to read and display data of n employees (Name, Employee Id and Salary) using structure.	(7)
	b.	Define recursive function. Write a recursive function in C to find the factorial of a given number.	(7)

OR

18	*a.*	Explain various storage classes in C with an example.	(7)
	b.	Write a C program to swap two numbers using user defined functions.	(7)
19	*a.*	Explain any four file handling functions used in C.	(7)
	b.	Write a C program to swap two numbers using pointers.	(7)

OR

20	*a.*	Write a C program to read the data in a given file and display the file content on console.	(7)
	b.	Explain any three file Input and Output functions used in C.	(7)

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