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Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
Second Semester B.Tech Degree Examination July 2021 (2019 scheme)

Course Code: EST102
Course Name: PROGRAMMING IN C
(AN Session)

Max. Marks: 100   Duration: 3 Hours

PART A
Answer all Questions. Each question carries 3 Marks   Marks

1	Differentiate between system software and application software.	(3)
2	Write an algorithm to find the largest of three numbers	(3)
3	What is the difference between assignment and equality operators?	(3)
4	What is a static variable? When should it be used?	(3)
5	Write a C program to find length of a string without using string handling functions.	(3)
6	What is an array? Illustrate using an example, how a single dimensional array is initialised.	(3)
7	Differentiate between structure and union using an example.	(3)
8	Illustrate the purpose of return statement using an example.	(3)
9	Differentiate between char name[] and char *name in C.	(3)
10	Explain the use of fseek() function.	(3)

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

11	a)	Draw a flowchart to find the factorial of a number.	(6)
	b)	With the help of a neat diagram explain the functional units of a computer.	(8)

OR

12	a)	List five important registers in CPU. Also state the purpose of each register.	(6)
	b)	Write algorithm and draw flowchart to perform swapping of two numbers.	(8)
13	a)	Explain arithmetic, logical and bitwise operators with examples.	(7)
	b)	Write a C Program to check if a given number is a strong number or not. A strong number is a number in which the *sum of the factorial of the digits is equal to the number itself.* Eg:- 145=1!+4!+5!=1+24+120=145	(7)

OR

14	a)	Write C program to convert the given decimal number into binary number.	(7)

b) What do you mean by Formatted Input? Explain in detail the prototype of 'scanf()' function in C including its argument list and return type. (7)

15 a) Explain any 4 string handling functions in C programming. (7)

b) Write a C program to perform linear search on an array of numbers (7)

OR

16 a) Write a C program to find second largest element in an array. (7)

b) Write a C program to check whether a string is palindrome or not without using string handling functions. (7)

17 a) What are different storage classes in C? Give examples for each. (7)

b) Write a C program to: (7)

(i) Create a structure with fields: Name, Address, Date of birth.

(ii) Read the above details for five students from user and display the details

OR

18 a) What is recursion? Write a C program to display Fibonacci series using recursive function. (7)

b) Write a C program to sort N numbers using functions. (7)

19 a) Explain any 5 file handling functions in C. (7)

b) Write a C program to reverse a string using pointers. (7)

OR

20 a) Differentiate between array of pointers and pointer to an array. (7)

b) Write a C program to count number of lines in a text file. (7)

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