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BTECH
(SEM I) THEORY EXAMINATION 2021-22
COMPUTER SYSTEM & PROGRAMMING IN C

Time: 3 Hours**Total Marks: 100****Note:** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A****1. Attempt all questions in brief.****2 x 10 = 20**

a.	Differentiate between = and == operators.
b.	How many bytes does 4 kilobytes represent?
c.	Differentiate between logical error and syntax error.
d.	Find the value of X in the following expression as per C language. X= -5%10;
e.	Define Function and its type.
f.	Print "hello world" using without semicolon in C program.
g.	State limitation of using an array.
h.	Enumerate any five different functions defined in string.h
i.	Differentiate between static and dynamic memory allocation.
j.	Write a short note on command line arguments.

SECTION B**2. Attempt any three of the following:****10x3=30**

a.	Differentiate between algorithm, pseudocode, and flowchart.
b.	Explain the concept of operator precedence and associativity with proper example.
c.	Write a program in C to print following pattern with appropriate comments: A B C D E F G H I J
d.	Explain the importance of structure in C programming. Write a program in C using structure to enter and print the details of five employees.
e.	Define the dynamic memory allocation and various functions for dynamic memory allocation, with suitable examples.

SECTION C**3. Attempt any one part of the following:****10x1=10**

a.	Differentiate between call by value and call by reference with proper example.
b.	Explain in detail about all storage classes with proper example.

4. Attempt any one part of the following:**10x1=10**

a.	Describe the basic components of a digital computer with a neat block diagram.
b.	Describe operating system and its different functions.

5. Attempt any one part of the following:**10x1=10**

a.	Design algorithm and Draw flow chart to find the largest of three numbers.
b.	Design algorithm and Draw flow chart to find whether a given year is leap year or not.

6. Attempt any one part of the following:**10x1=10**

a.	Write a program in C to find the multiplication of two matrices.
b.	What do you mean by sorting? Write a C program to sort n numbers using bubble sort. Explain an example step by step.

7. Attempt any one part of the following:**10x1=10**

a.	What do you mean by pointer? How these are declared and initialized. How pointers are used in self-referential structures. Explain.
b.	List out various file opening modes in C. Write a program to copy the content from one file to another file.