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WTECH
(SEM II) THEORY EXAMINATION 2021-22
COMPUTER SYSTEM & PROGRAMMING IN C

Time: 3 Hours

Total Marks: 100

Name: Attempt all sections. If require any missing data, then choose suitably.

SECTION A

1. Attempt all questions in brief. 2x10 = 20

a.	What is the role of a header?
b.	Write down the advantages and disadvantages of machine level language.
c.	Determine the value of the following logical expressions if a=3, b=10 i. a < b && a < b ii. a < b && a <= b
d.	Propose an expression using ternary operator to find maximum of three numbers.
e.	Differentiate between break and continue.
f.	What will be the output of following? <pre>#include <stdio.h> void main() { int i; for(i=0; i<=10; i++) printf("%d\n", i); }</pre>
g.	What is prototyping? Why it is necessary?
h.	An array is declared as <pre>int a [1000];</pre> If the base address of the array is 7000, what will be the address of a[9]. (Consider the 16 bit machine architecture).
i.	Explain the statement break (if, as, 1).
j.	How a structure is different from union?

SECTION B

2. Attempt any three of the following: 3x5 = 15

a.	Classify the computers according to generation.
b.	Define algorithm and explain the characteristics of Algorithm. Write an algorithm to find the roots of a quadratic equation.
c.	What do you mean by type-casting? Explain with a suitable example.
d.	Write a program to add the contents of the array using pointer.
e.	How entry-controlled loop is different from exit-controlled loop? Write a program to print the pattern <pre>1 2 3 4 5 6 7 8 9 10</pre>

SECTION C

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

a.	Differentiate between compiler and interpreter.
b.	Convert the following i. (271) ₁₀ = () ₁₆ ii. (359) ₁₆ = () ₁₀