

CS 3653 – Discrete Mathematics for Computer Science

PA – 3	Due – Nov 6, 2023, 11:59 pm (CST)
Chapter # 4 & 5	Max. Points # 50

Important Note: [You may be asked to explain the programming code.](#)

SN	QUESTION	Pts
1	Write a program with the specified input and output. Given the positive integers a, b, and m with $m > 1$, find $a^b \bmod m$. The value of a, b and m should be taken from the user through keyboard.	12.5
2	Write a program with the specified input and output. Given a positive integer n, determine the Binary, Octal and Hexadecimal equivalent of n. The value of n should be taken from the user through keyboard.	12.5
3	Write a program with the specified input and output. Given a real number a and a nonnegative integer n, find a^{2^n} using recursion. The value of a and n should be taken from the user through keyboard.	12.5
4	Write a program with the specified input and output. Determine which Fibonacci numbers are divisible by 2 or 3, and 5, out of the first n terms. The value of n should be taken from the user through keyboard.	12.5