The Computers & Its Number System

Computer Science Course by Rajat Rai

Assessment 02 for the month April
Due Date: 23 April, 2022 (at 7:40 pm)

Instructions:

- The maximum grade point that can be obtained is 10 at the discretion of the instructor.
- The assessment is divided into 3 sections according to the types of problems.
- Adhere by the word limit prescribed (if applicable) to get maximum points for the answer.
- Submission has to be made via mail on therajatraiofficial@gmail.com.

Section A: *This section aims to test your critical thinking. Try to include all the valid points in order to get maximum grade points. Adhere by the word limit: 40 to 60 words.*

Problem 01

How the idea of Analytical Engine made Charles Babbage, the father of computer? How the idea of Analytical engine led to the development of modern computers?

Problem 02

What was Von Neuman Architecture? How it resembles to the modern computer?

Section B: *This section aims to test your creative thinking. Try to include all the valid points in order to get maximum grade points. Adhere by the word limit: 70 to 100 words.*

Problem 03

What do you mean by a positional number system? Why it is difficult for computers to manage decimal number system? How your images are stored on your computer, knowing your computer understands only 1's and 0's?

Problem 04

What do you understand by a number system? How is the Binary number system different from the Decimal Number system?

Section C: *This section aims to test your Knowledge Base. Try to include all the valid points in order to get maximum grade points. Adhere by the word limit: 90 to 120words if applicable.*

Problem 05

A register in a computer contains binary digits, 00 1 1 01 1 1. The contents of the register could represent a binary integer. Convert the binary integer to decimal and hexadecimal. An 8-bit memory can accommodate how many values?

Problem 06

What are the different number systems? Explain their qualities in brief. Convert 450 a decimal number, into binary and octal number system.