

Wednesday, February 2, 2022

1. Define the following terms: 3
 - Computer.
 - Computer layer.
 - Job of operating system
2. Show the relationship between hardware, software and instruction set. Also give an example. 5
3. Two different compilers are being tested for a 150 MHz's machine with three different classes of instructions: Class A, Class B, and Class C, which require two, three and four cycles (respectively). Both compilers are used to produce code for a large piece of software. The first compiler's code uses **(i+5)** million Class A instructions, **(i+1)** million Class B instructions, and **(i+1)** million Class C instructions. The second compiler's code uses **(i+10)** million Class A instructions, **(1+i)** million Class B instructions, and **(1+i)** million Class C instructions

Where i = last 2 digits of your ID number

- i) Which sequence has the higher MIPS rate?
- ii) Which sequence will be faster according to execution time? 12

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