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CSCE 3613 Operating Systems Homework #4 ver. 6.2

Bits, Bytes, Words, Etc.

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8 points

4 questions

Instructions

- Type your work, print it to a *single* PDF, and upload it to Blackboard before the due date and time. It is strongly suggested to use the given document.

- Show all of your work. Without proper justification and details of steps, correct answers alone may not carry full credit.

- -1 point if you do not insert your name and ID at the top of the document.

- -1 point if it is not typed.

- -1 point if it is not a PDF file.

- -1 point if it is not a single PDF file. Submit one PDF file. Do NOT submit zip files containing one

or more files.

- -1 point if you present the worked problems out of order. In other words, please present the problems in the order assigned, 1, 2, 3, ...

1. (2 pts.) In the computer science field, the computer engineering field, and in the operating systems class, how many bytes are there in a Kilobyte? Be specific. Do not round.

- a. 2^{10} , or 1024 bytes

2. (2 pts.) According to NIST, what is a pebibyte? Be specific. Do not round.

- a. 1 pebibyte = 2^{50} bytes or 1,125,899,906,842,624 bytes

3. (2 pts.) In the computer science field, the computer engineering field, and in the operating systems class, how many bytes are there in an Exabyte? It will be a power of 2. Be specific. Do not round.

- a. 2^{60} bytes or 1, 152, 921, 504, 606, 846, 976 bytes

4. (2 pts.) In the computer science field, the computer engineering field, and in the operating systems class, how many bits are there in a nibble?

- a. 2^2 or 4 bytes

- i. (This could round to 0 since that is not disallowed on this question)

The End.