Version A

Quiz #2

CSE 3320.002

Spring 2015

Name: _____

UTA ID:_____

"I certify that the following work is my work alone and I will follow the highest standards of integrity and uphold the spirit of the Honor Code"

Signature:_____

Directions: This is a closed book, closed notes quiz. Please answer the questions in briefly. Complete sentences are not necessary. Write your answers legibly. Unreadable answers will be counted wrong. You may write on back if needed.

n	2^n	n	2^n	n	2^n
0	1	11	2,048	22	4,194,304
1	2	12	4,096	23	8,388,608
2	4	13	8,192	24	16,777,216
3	8	14	16,384	25	33,554,432
4	16	15	32,768	26	67,108,864
5	32	16	65,536	27	134,217,728
6	64	17	131,072	28	268,435,456
7	128	18	262,144	29	536,870,912
8	256	19	524,288	30	1,073,741,824
9	512	20	1,048,576	31	2,147,483,648
10	1,024	21	2,097,152	32	4,254,967,296

1. In a virtual memory environment with 2 GB addressable space, where pages are 2KB bytes in size:
    1. How many entries are in the page table (maximum)?
    2. How would 31-bit addresses be used (how many page bits, how many offset bits)?

2. Describe logical addresses and physical addresses.

3. Given a page request reference string of D E F A B E A C D F and a page table size of three, calculate how many page faults will occur with the FIFO page replacement algorithm. Assume pages no pages are initially loaded into the page table. If all pages are equally replaceable pick the first available.

4. What is internal fragmentation?

5. Of the binding models we discussed, list two.