EGR 270 Name: _____
Fundamentals of Computer Engineering Due date: See Course Schedule
File: N270H1A

Homework Assignment #1

Reading Assignment:

Chapter 1 in the textbook Logic and Computer Design Fundamentals, 5th Edition by Mano

Problem Assignment:

Notes:

- Include instructions and given information.
- You must show your work for all conversions. If you have a calculator or an online program that can convert between bases, use it only to check your results. No calculators of any type will be allowed on the first test.

1. Work the following Chapter 1 problems (3 pts/part):
   4, 7 (first two parts only), 8 (first and third part only), 9 (lines 1 and 2 only), 10
   11 (parts a and b only), 12 (parts a and b only), 13, 18, 19, 24, 26, 27

2. Additional Problems: Find the following complements (8 pts)

X	1's complement of X
10110011	
00100100	

X	2's complement of X
110001	
000011	

X	9's complement of X
1024	
9876	

X	10's complement of X
2500	
7337	

On-Line Solutions:

Solutions to selected problems are available at the ***Companion Website*** for the textbook: www.prenhall.com/mano . The solutions presented there are typically brief and should just be used to check your results. If your solutions look like a copy of the online solutions, no credit will be given. You might also try:
http://wps.pearsoned.com/ecs_mano_lcdf_5/248/63706/16308896.cw/index.html

Problem Format

Your solutions should include:

- Given information with the problem
- Detailed solutions
- Boxed answers (where appropriate)

Selected Answers: (Check the ***Companion Website*** for other answers)

4) a) 128k = 128 x 2^{10} = 131,072 bits c) 8G = 8 x 2^{30} = 8,589,934,592 bits

8) a) 10111011 c) 11111011110

12) a) 1111000 c) 110110110101

13) Quotient = 10001, Remainder = 1

24) Go_ ……!

26) a) U+0040 = 01000000 c) U+20AC = 11100010 10000010 10101100

27)

Decimal	binary – trailing odd parity	binary – trailing even parity
32	1000000	1000001
33	1000011	1000010
34	1000101	1000100
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