King Fahd University of Petroleum and Minerals
College of Computer Sciences and Engineering
Department of Computer Engineering

COE 202 – Digital Logic Design (T121)

Homework # 01 (_due date & time: Monday 17/09/2012 during class period_)

*** Show all your work. No credit will be given if work is not shown! ***

Showing all calculations steps (i.e. final answers alone are not acceptable), solve the following problems:

Problem 1 (15 points): Convert $(47)_{10}$ to binary, octal, and hexadecimal.

Problem 2 (15 points): Convert the following binary numbers to decimal:
1. $(10010010)_2$
2. $(10010100.0101)_2$
3. $(100010.1011)_2$

Problem 3 (30 points): Convert the following decimal numbers to the stated number system:
1. $(1831.82421875)_{10} = (?)_{16}$
2. $(157.921875)_{10} = (?)_8$
3. $(63.6875)_{10} = (?)_2$

Problem 4 (30 points): Convert the following numbers to the stated number system:
1. $(BF91.D)_{16} = (?)_8$
2. $(3731.74)_8 = (?)_{16}$
3. $(1321.2301)_4 = (?)_8$

Problem 5 (10 points): Find the proper radix r in the following case: $(159)_r = (F3)_{16}$