Indian Institute of Technology Kharagpur

SPRING Semester, 2013
COMPUTER SCIENCE AND ENGINEERING

CS21002: Switching Circuits and Logic Design

Practice Assignment–2

Full Marks: 100

Time allowed: ϵ hours

INSTRUCTIONS: INSTRUCTIONS: These assignments are for your practice and would not be graded. All problem numbers in this assignment refer to the book *Switching and Finite Automata Theory* (3rd Edition) by *Z. Kohavi* and *N. K. Jha*, unless stated otherwise. Practice as many exercise problems as you can.
Tutorial Date: 06/02/2013.

Chapter 5: Logic Design

1. 5.4 [Hint: Think about the PoS representation of T from the K-map].

2. 5.6.

3. 5.7.

4. 5.9.

5. 5.11 (b).

6. 5.14 [Hint: a *full subtractor* would have a *borrow* input, just like a *full adder* has a *carry* input].

7. 5.15.

8. 5.19.

9. Implement the following Boolean functions using using complex CMOS structure: (a) $xy' + yx'$; (b) $A(B + C + D) + F'E$.