Dr. Ashraf S. Hasan Mahmoud   December 16th, 2008

COMPUTER ENGINEERING DEPARTMENT

COE-202 – Fundamentals of Computer Engineering (section 02)

Student Name:

Student Number:

Q1. (**20 points**) Given the function F(A,B,C,D)= AB'C' + AC + A'CD'

a) Plot the K-Map for F(A,B,C,D)

b) Determine the Prime Implicants and the Essential Prime Implicants for function F(A,B,C,D).

c) Simplify the function F(A,B,C,D) in the form of sum of products

d) Simplify the function F(A,B,C,D)in the form of product of sums

e) Implement the circuit in part (d) with NOR gates.