Izmir University of Economics
Digital Design (EEE242)
Final Exam (Date: 10/7/2021)
Instructor: Dr. Faezeh Yeganli

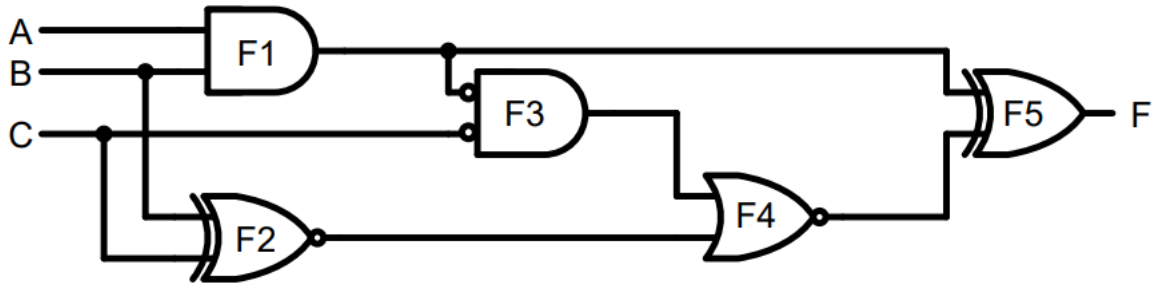
Name: .....
Student's Number:.....

Questions	Mark
Q1(%25)	
Q2(%25)	
Q3(%25)	
Q4(%25)	
Total	

Q1) Convert the following numbers from the given base to the other three bases listed in the table. Show all your work.

Decimal	Binary	Hexadecimal	Octal (Base 8)
28.5			
	100011.01		
		2B.A	
			24

Q2) Analyze the following circuit:



(a) Use the truth table and determine the output F as sum of minterms and product of maxterms.

(b) Use Karnaugh Map to simplify the equation obtained in (a).

(c) Implement the SOP and POS circuits with minimum number of gates.

Q3) Construct 4-bit ripple carry adder using 1-bit full adder.

Q4) Given the state diagram below, generate the state table.