Name, Surname :
Number :
Course Code :
Course Name :
Exam : ○ Quiz   ○ Midterm   ● Final
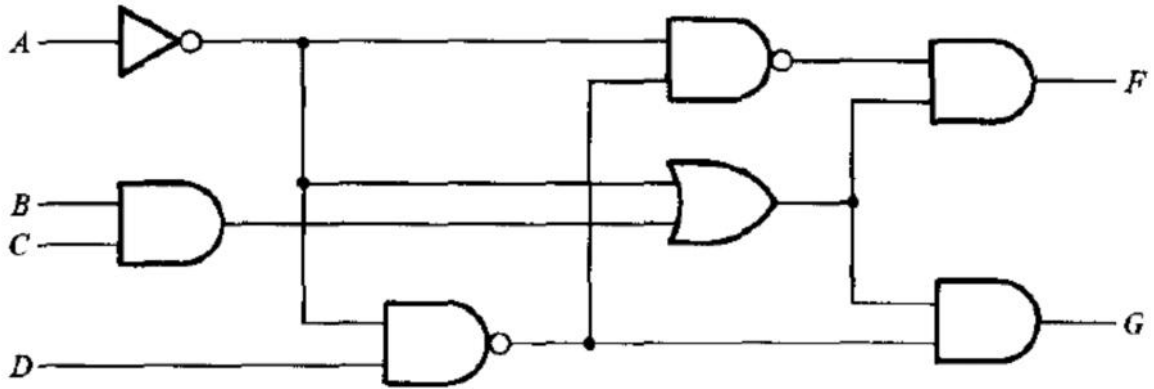Date :

Please make sure to write your name and student number on each paper that you have used

Question Number	1	2	3	4	5	Total
Mark						

Note: Exam duration is 90 minutes only.

Questions

1- Determine the Boolean function for output F,G as a functions of four input A,B,C,D in figure below

2- Design a combinational circuits that adds **one to a 4 bit binary** number,A_3 ,A_2 ,A_1 ,A_0 .For example, if the input of the circuit is,A_3 ,A_2 ,A_1 ,A_0 =1101, the output is 1101+1= **1110**

3- Simplify the boolean fonction, $F(a,b,c,d)=\sum(1,3,7,11,15)$, **don't care** conditions $d(a,b,c,d)= \sum(0,2,5)$

4- $F(a,b,c)= \sum(2,5,6,7)$ design the circuit with 4x1 MUX.

5- Design a Mod 9 asynchronous counter with using JK flip-flops.

Yard.Doç.Dr. Oğuz ATA