Logic Design– Assignment 03

Binary Code and Binary Logic

#	Student ID	Student Name	Grade (10)
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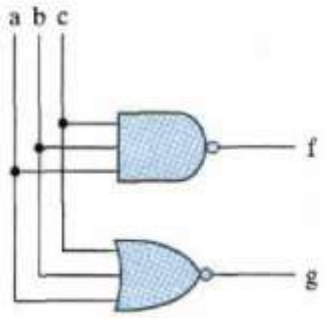
Delivery Date	

١. يتم تسليم التمرين محلولا في خلال أسبوع من تاريخ التمرين، و يتم حذف درجتين من التمرين عن كل أسبوع تأخير
٢. يتم التسليم لمعيد المقرر مباشرة
٣. تتم أجابه التمرين في نفس ورق الأسئلة

Q1	Represent the unsigned decimal numbers 842 and 537 in BCD, and then show the steps necessary to form their sum.
Sol 1	.....

Q2	Represent the decimal number 5,137 in (a) BCD, (b) excess-3 code, (c) 2421 code, and (d) a 6311 code.
Sol 2	.....

Q3	By means of a timing diagram similar to Fig. 1.5, show the signals of the outputs f and g in Fig. P1.35 as functions of the three inputs a, b, and c. Use all eight possible combinations of a, b, and c. 
Sol 3	.....

Q4	How many printing characters are there in ASCII? How many of them are special characters (not letters or numerals)?
Sol 4	.....

Q5	Decode the following ASCII code: 1000010 1101001 1101100 1101100 1000111 1100001 1110100 1100101 1110011.
Sol 5	....

Q6	Write the expression "G. Boole" in ASCII, using an eight-bit code. Include the period and the space. Treat the leftmost bit of each character as a parity bit. Each eight-bit code should have even parity. (George Boole was a 19th century mathematician. Boolean algebra, introduced in the next chapter, bears his name.)
Sol 6	.....