

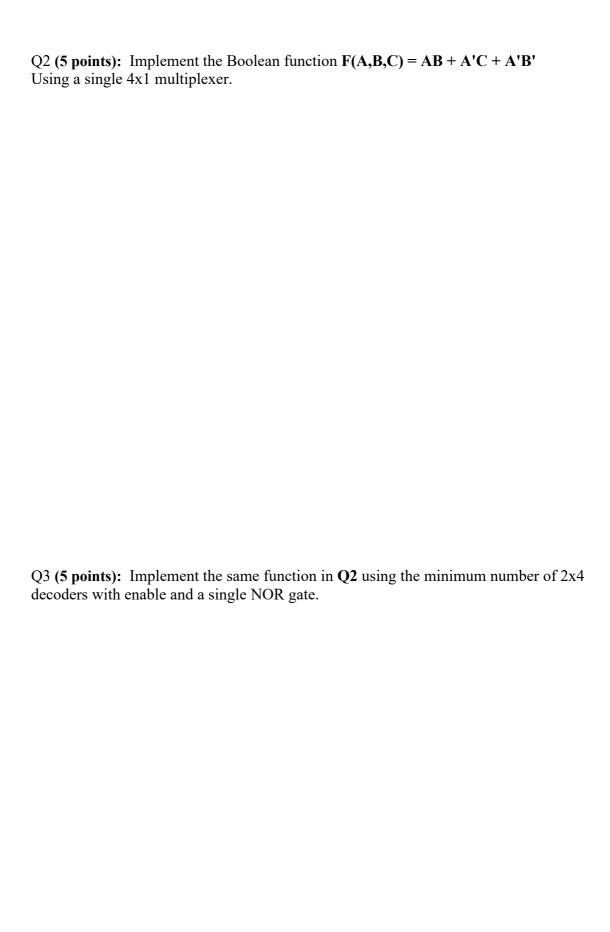
Birzeit University Faculty of Engineering and Technology Department of Electrical and Computer Engineering First Semester – 2023/2024 ENCS2340 - Digital Systems Homework # 2

Student name:	
Student ID:	

Notes:

- 1- Use this page as a cover for your homework.
- 2- Late homeworks will not be accepted (the system will not allow it).
- 3- Due date is Wednesday January 17, 2024at 11:59 pm on ritaj.
- 4- Organize your solution for each question (Q1, Q2, etc.) and add them to one file. Then, name you file as (Assign2_LastName_FirstName_StudetnsID.pdf).

Q1 (10 points): Design a combinational circuit with three inputs, x, y and z, and the three outputs, A, B, and C. when the binary input is 0, 1, 2, or 3, the binary output is one greater than the input. When the binary input is 4, 5, 6, or 7, the binary output is one less than the input.



Q4 (10 points): Implement the following function $F(A,B,C,D) = \sum (0, 2, 4, 6, 8, 10)$ using a. Mux 4×1 b. Decoders 3-to-8 c. AND-OR d. NAND-NAND Q5 (6 points): In the following function determine the Essential prime implicant $F(A,B,C,D) = \Sigma (0,2,5,7,6,8.9,10,11,13,14,15)$ Q6 (4 points): Explain the concept of odd parity generator?