Fundamentals of Engineering Design (FED) 101- LC9

Test 2

Student name:

Student ID number:

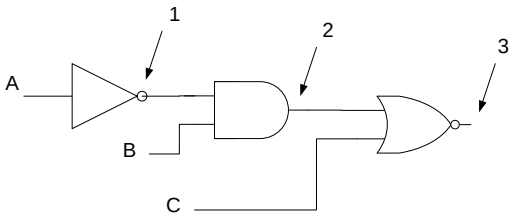
Please provide complete and clear answers.

1. Complete the truth table for following Boolean expression (2 points)

$$Output = A + \bar{A}B$$

A	B	Output
0	0	0
0	1	1
1	0	1
1	1	1

2. Convert the following logic gate circuit into a Boolean expression, writing Boolean sub-expressions next to each gate output (1,2 and 3) in the diagram (3 points)



Output 1: $\bar{A}$

Output 2: $\bar{A}B$

Output 3: $\overline{\bar{A}B + C}$

3. Draw a gate circuit to perform the following function (5 points)

$$A\bar{B} + \bar{C}(A \oplus B)$$