

LabWork#6

**Question # 1**

- (a) Design Full-Adder circuit using logic gates.
- (b) Draw the 4-bit parallel adder, and find the sum and output carry for the addition of the following two 4-bit numbers if the input carry ( $C_{in}$ ) is 0:

$$A_4A_3A_2A_1=1010 \quad \text{and} \quad B_4B_3B_2B_1=1011$$

**Question # 2**

- (a) Design 2-to-1-line multiplexer.
- (b) Design the 4-to-1-line multiplexer