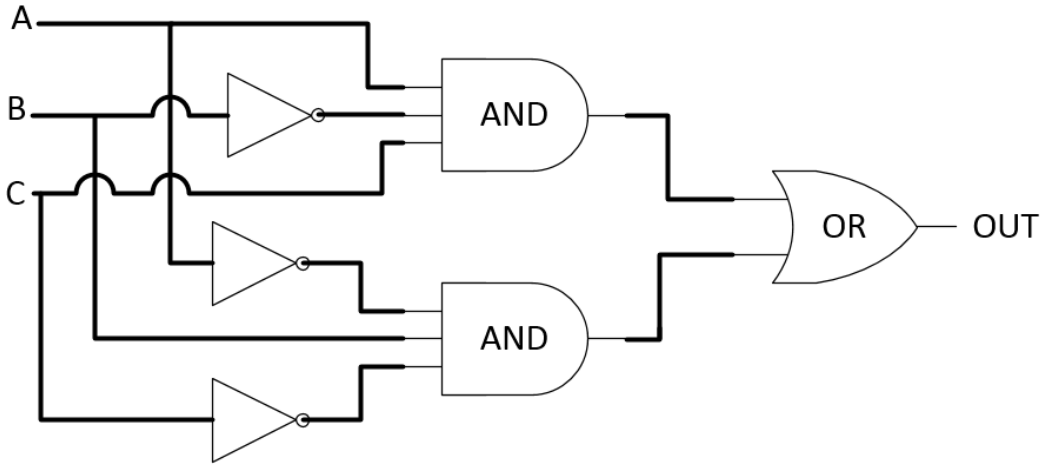
**Quiz 2, CSCIU 210, Fall 2018** **Name: _____Key_____**

**Instructions:** You must show your work and put your final answers in the blanks. If you round a numerical answer, **you must give at least 3 significant digits**.

**1)** Convert the following Boolean equations to corresponding logic circuit using AND, OR, and NOT logic gates (ensure you label each input and output for every logic gate)

**(A•B'•C) + (A'•B•C')**

(**Note:** You can use three input logic gate in your diagram). **[5 pts]**




**2)** Perform the following number conversions [5 pts]

**a)** $1101.0011_2$= **(_____D.3_____)$_{16}$ (2 point)**

**b)** $13.875_{10}$=**(___1101.1110______)$_2$ (3 points)**

*Final Answer* = **(a)_____( D.3)$_{16}$_____, (b)___( 1101.1110)$_2$_____**

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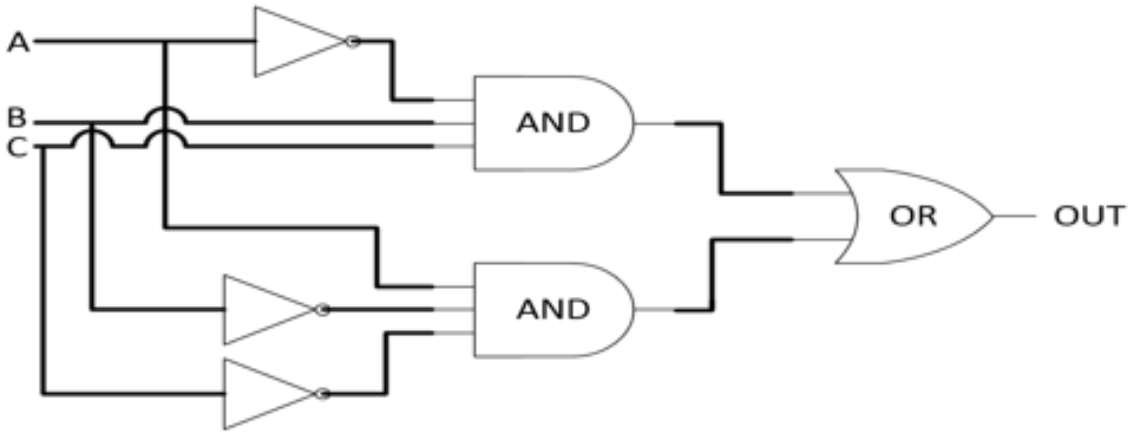
**Instructions:** You must show your work and put your final answers in the blanks. If you round a numerical answer, **you must give at least 3 significant digits**.

**3)** Convert the following Boolean equations to corresponding logic circuit using AND, OR, and NOT logic gates (ensure you label each input and output for every logic gate)

**(A'•B•C) + (A•B'•C')**

(**Note:** You can use three input logic gate in your diagram). **[5 pts]**




$Final\ Answer =$ _____

**4)** Perform the following number conversions [5 pts]

**a)** $32BD_{16}$ = **(_____12989_____)10** **(3 point)**

$$32BD_{16} = 13\times16^{0} + 11\times16^{1} + 2\times16^{2} + 3\times16^{3} = 12989$$

**b) 1011.0111$_2$ = (_____11.4375_____)$_{10}$ (2 points)**

$Final\ Answer =$ **(a)**_ 12989__, **(b)**_**11.4375**_____