QUIZ NUMBER ONE FOR MTH213 SPRING007

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Name———————, Id. Num.———————————-, Score $\frac{}{15}$

QUESTION 1. *Let $F(x)$ be the statement "x took a math course at the AUS.", and $M(x)$ be the statement " x took a philosophy course at the AUS." Express each of the following statements using quantifiers and logical connectives. Let the domain be all AUS students.*
*(***9 points***)*

(1) *Every student in the AUS took a math course.*

(2) *Mike did not take a philosophy course at the AUS.*

(3) *For each of the two courses, there is a student in the AUS who took one of these courses.*

(4) *There is a student in the AUS who neither took a math course nor a philosophy course.*

(5) *There is exactly one student in the AUS who took a philosophy course but not a math course.*

QUESTION 2. *Let x be any even integer and y be any odd integer. Write down T or F then negate the statement:*
*(***6 points***)*

(1) $\forall x \exists y (x + y$ *is even).*

(2) $\exists! x \forall y (xy = y)$

(3) $\exists x \exists y$ *(x divides y)*

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