

**COURSE : DISCRETE MATHEMATICS**

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**QUESTION:**

**26.** Exercise 23 relates to inhabitants of the island of knights and knaves created by Smullyan, where **knights always tell the truth and knaves always lie**. You encounter two people,  $A$  and  $B$ . Determine, if possible, what  $A$  and  $B$  are if they address you in the ways described. If you cannot determine what these two people are, can you draw any conclusions?

$A$  says "I am the knave,"  $B$  says "I am the knave," and  $C$  says "I am the knave."

**ANSWER:**

**26.** Here nothing can be determined. Because,

Knight will never speak that he is knave.

And knave also will never speak that he is knave.

And any of the  $A$ ,  $B$ ,  $C$  can be spy.