

## DEPARTMENT OF COMPUTER SIENCE AND ENGINEERING

## PUZZLES

|  | PUZZLES | ANSWERS |
| :--- | :--- | :--- |
| 1. | $\begin{array}{l}\text { "You are standing at a crossroad, and there are } \\ \text { three paths ahead of you. Each path leads to a } \\ \text { different destination. You can ask the locals } \\ \text { for directions, but they are known to give } \\ \text { incorrect information. One path leads to the } \\ \text { city you want to go to, and the other two paths } \\ \text { lead to different places. You can only ask one } \\ \text { question to one local, and they will answer } \\ \text { with either 'Yes' or 'No.' What question should } \\ \text { you ask to find the correct path?" }\end{array}$ | $\begin{array}{l}\text { To find the correct path, you can ask the locals the } \\ \text { following question: "If I were to ask the other person } \\ \text { which path leads to the city I want to go to, what } \\ \text { would they say?" Then, take the opposite of their } \\ \text { answer. If the person you asked gives incorrect } \\ \text { information, this method will lead you to the correct } \\ \text { path. }\end{array}$ |
| 2. | $\begin{array}{l}\text { "You have three boxes, each labeled with a } \\ \text { sign: 'Apples,' 'Oranges,' and 'Mixed Fruits.' } \\ \text { One box contains only apples, another only } \\ \text { oranges, and the third has a mix of both fruits. } \\ \text { However, all the signs are placed incorrectly, } \\ \text { and none of them represent the actual contents } \\ \text { of the boxes. You can take out and look at the } \\ \text { fruits from one box only. How can you } \\ \text { correctly label all three boxes with the correct } \\ \text { fruit names?" }\end{array}$ | $\begin{array}{l}\text { Take fruit from the box labeled 'Mixed Fruits.' } \\ \text { Since all the labels are incorrect, this box cannot } \\ \text { contain mixed fruits. If you picked an apple, label } \\ \text { that box as 'Apples.' Then, you know the box labeled }\end{array}$ |
| 'Apples' must contain mixed fruits, so label it as |  |  |
| 'Mixed Fruits.' Lastly, the remaining box, which was |  |  |
| it as 'Oranges.' Fruits,' must contain oranges, so label |  |  |$\}$

