

Set for Team 48

Construct the necessary truth table(s), Boolean functions and Simulation file with the appropriate IC diagram comprising the basic logic gates that represent the following scenario:

Suppose in your bed room there are 2 light bulbs, 1 table lamp and 1 ceiling fan. Any of the bulb can serve your purpose accordingly and you wish to prepare a microcontroller-based device that only allows to turn on one of the bulbs, the lamp **AND** the fan together at a time. How are you supposed to build the underlying logic with a Boolean function? Construct the truth table according to your logic and draw the function from there.