ACTIVITY 1

A jet aircraft employs a system for monitoring the rpm, pressure and temperature values of its engines using sensors and operates as follows:

R sensor output=0 only when speed<4800 rpm

P sensor output =0 only when pressure <220 psi

T sensor output =0 only when temperature<220°F

Describe the logic circuit for condition that warning light should glow when the temperature is high AND pressure is high OR rpm is low

Solution

Boolean expression W=T.(P+R’)

Truth Table

|  |  |  |  |
| --- | --- | --- | --- |
| T | P | R | warning\_light |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 |

Proteus Snaps















