

LAB 2 DEMO – Simple System, Timing Analysis, and a Little more c

Reviewer _____

Team _____

Total _____ **Out of 190**

An Air Interlock System – A Design Problem (170)

The Interlock	35
Two bidirectional ports	20
Can open if pressure differential less than 0.1 atm	5
Interlock can be pressurized up to 16,000psi and depressurized to 13.0psi	10
On Arrival	60
Bathysphere signals 5 min before arrival	5
If chamber empty – inner and outer ports closed and sealed	5
Behaviour if not empty	5
Chamber pressurized to less than 0.1 atm – interior to exterior: outer port	5
Pressurization takes 7 minutes	5
Pressure less than 0.1 atm outer port opened	5
Bathysphere enters	5
Outer port closed and sealed	5
Chamber depressurized to less than 0.1 atm – interior to interior: inner port	5
Depressurization takes 8 minutes	5
Pressure less than 0.1 atm inner port opened	5
Aquanauts enter	5

On Departure	75
Outer port closed and sealed	5
If chamber empty – inner and outer ports closed and sealed	5
Behaviour if not empty	5
Chamber depressurized to less than 0.1 atm – interior to interior: inner port	5
Inner port opened and aquanauts enter interlock and bathysphere	5
Inner and outer ports closed and sealed	5
Bathysphere signals 5 min before departure	5
Chamber pressurized to less than 0.1 atm – interior to exterior: outer port	5
Pressurization takes 7 minutes	5
Pressure less than 0.1 atm outer port opened	5
Bathysphere exits	5
Outer port closed and sealed and interlock depressurized to 1 atm	5
Chamber depressurized to less than 0.1 atm – interior to interior: inner port	5
Depressurization takes 8 minutes	5
Pressure less than 0.1 atm inner port opened	5

C Language Functions (20)

Perform and display the computation using pointers to all variables:

$\text{result} = ((A - B) * (C + D)) / E$

Fully functional