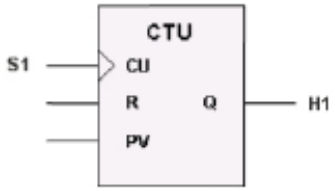
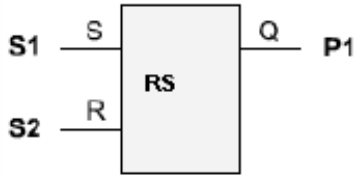
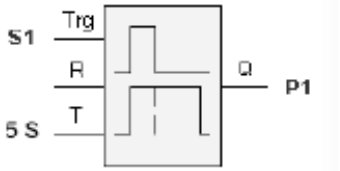
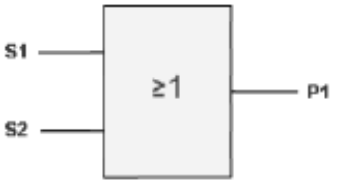
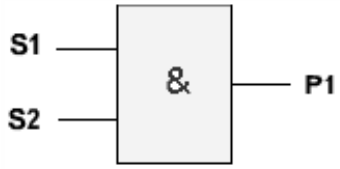
Worksheet (2) PLC

Programming with Function Blocks

Q1: Match the following tasks with the proper function blocks:

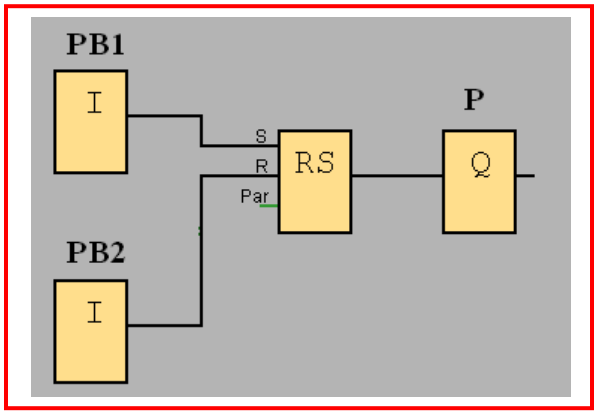
	Task			Function Blocks
1	Turn ON a machine when the PB is pressed and the machine door is closed		2	
2	Count the number of produced Cola cans		4	
3	Switch OFF a machine after a certain time		3	
4	Turn ON and Turn OFF a motor using the same function block		5	
5	Turn ON a lamp using either PB1 or PB2 or both		1	

Q2: For the following tasks write the correct expressions and draw the Function Block Diagrams:

a) A pump (P) turns ON when (PB1) is pressed and it turns OFF When (PB2) is pressed

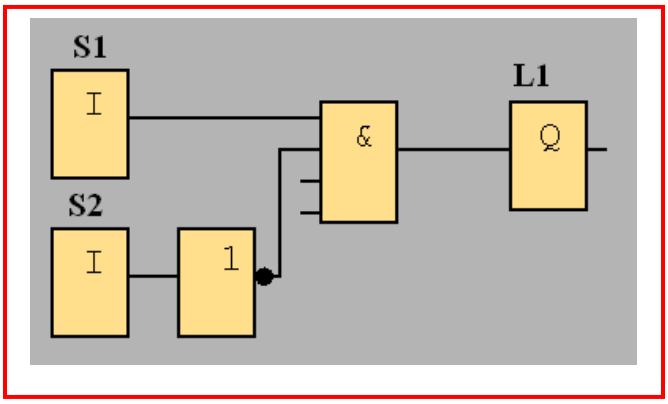
$P = PB1$

$\overline{P} = PB2$



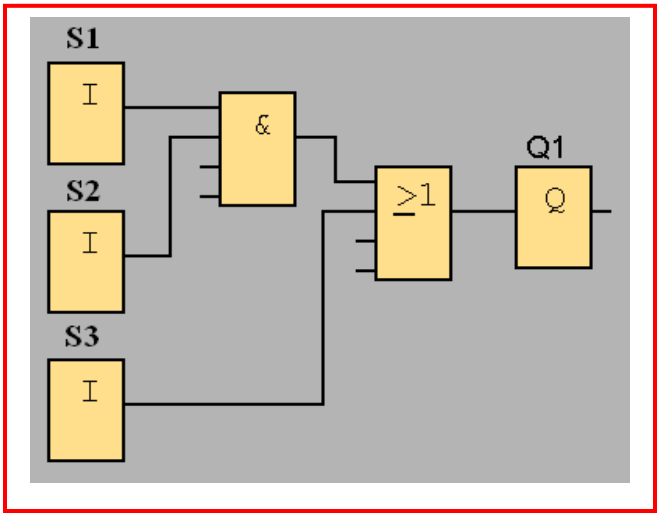
b) A light (L1) turns ON when (S1) is switched ON and (S2) is switched OFF.

$L = S1.\overline{S2}$

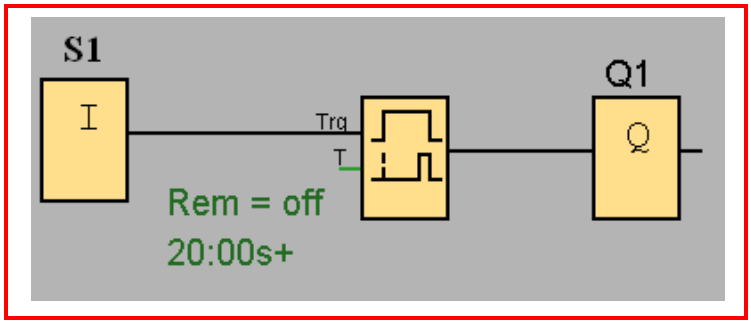


c) A green light (Q1) turns on when both (S1) and (S2) are switched ON or (S3) is switched ON

$Q1 = S1.S2 + S3$



d) A machine (Q1) starts 20 seconds after switching ON (S1), it keeps running until (S1) is switch OFF.

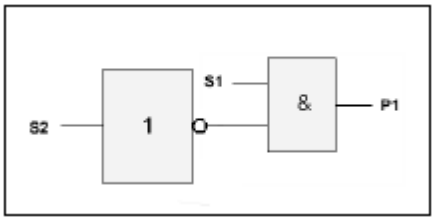


Worksheet (2) PLC

Programming with Function Blocks

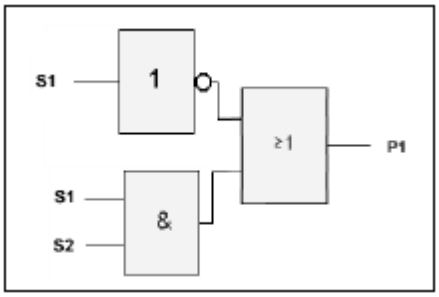
Q3: For the following FBDs write the correct expression:

a)



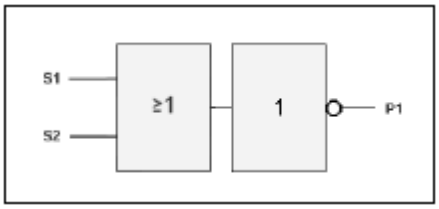
$P1=S1.\overline{S2}$

b)



$P1=\overline{S1}+(S1.S2)$

c)



$P1=\overline{S1+S2}$