1) So basically when the water in tank is above 20% the circuit is completed between A & B and as soon as water falls below 20% the circuit A & B is disconnected and then pump shall start.

When circuit B & C is completed that means tank is full and pump shall stop.
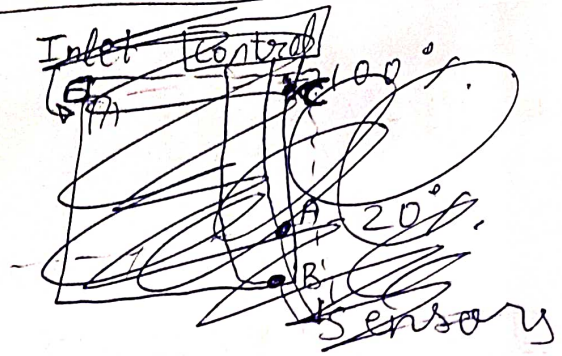
To make this sensor fail safe we shall ensure ~~about~~ to use long lasting components and fixing sensors B (at bottom of tank), A (at 20% mark) C (at 100% mark of tank) such that they dont fall off due to water or other factors ~~a~~ like corrosion which may break the clamps and sensors.
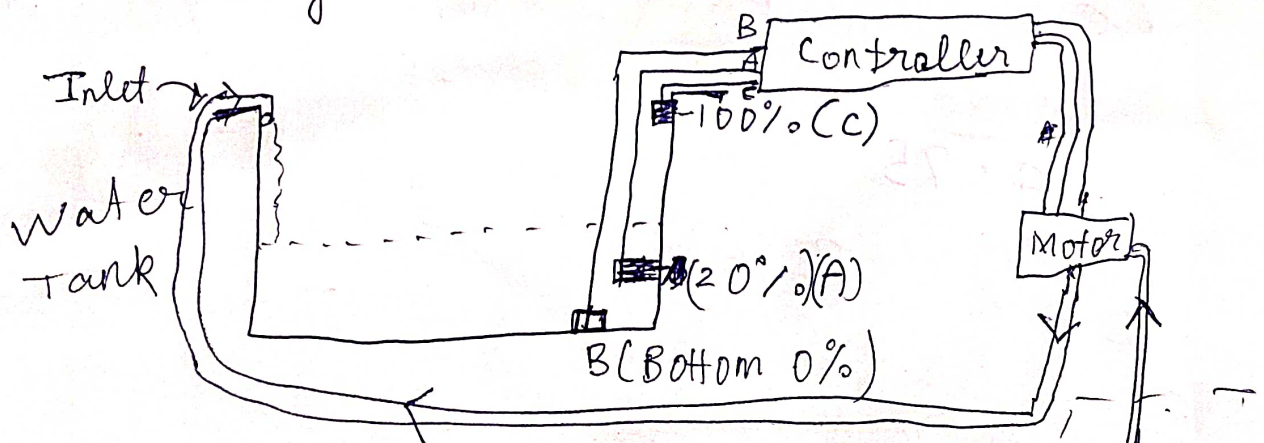
System constraints:

Input voltage = 230 V Ac.

Motor Power = ~~30h~~ 1 KW

Max motor current ~~020~~ 2.5 ~3A

So our relay shall be capable of handling 3 A under normal cases.

We use Platinum Electrodes for that

We have to turn on when Port(A) is ~~high~~ low and turn off when A and C are both high.

Port B is at Vcc (12V)

(In case the tank size is big then very small check voltage may cause errors.