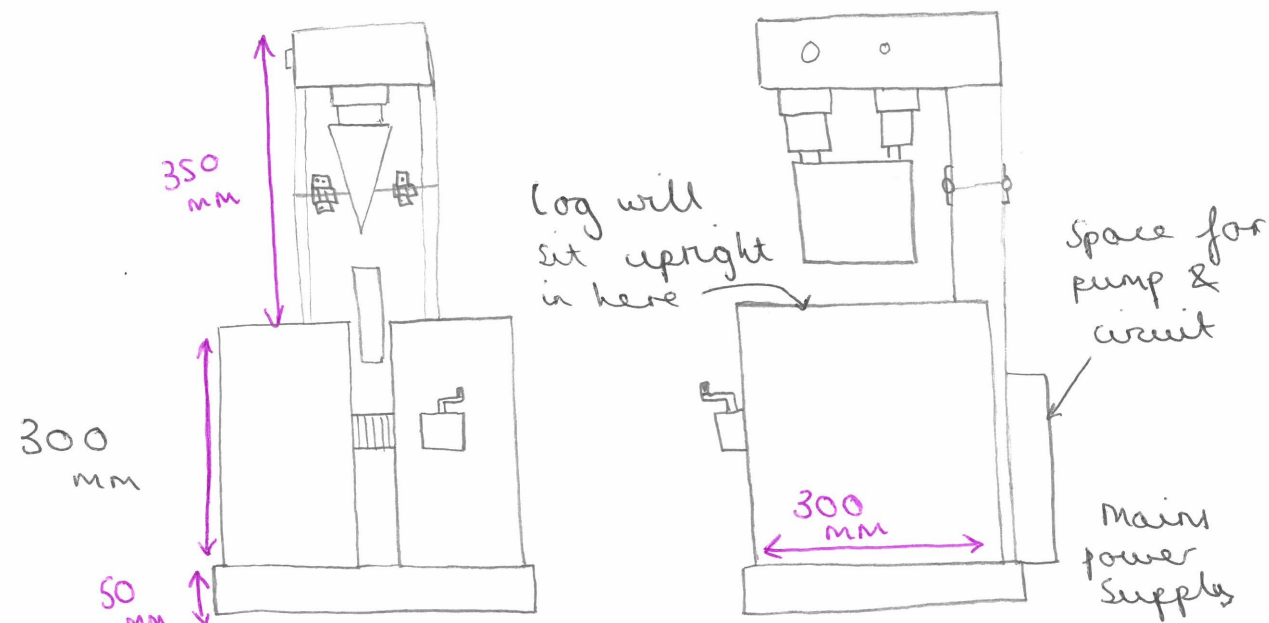


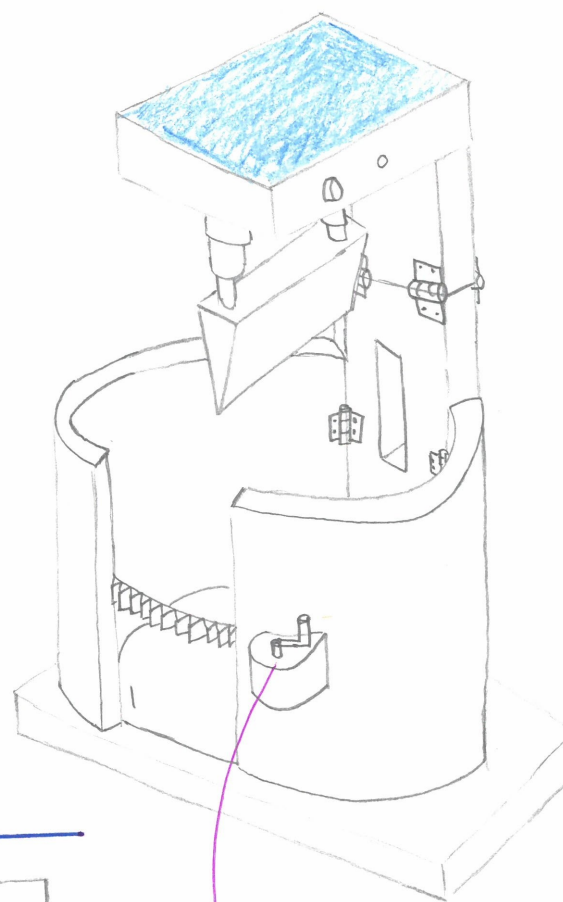
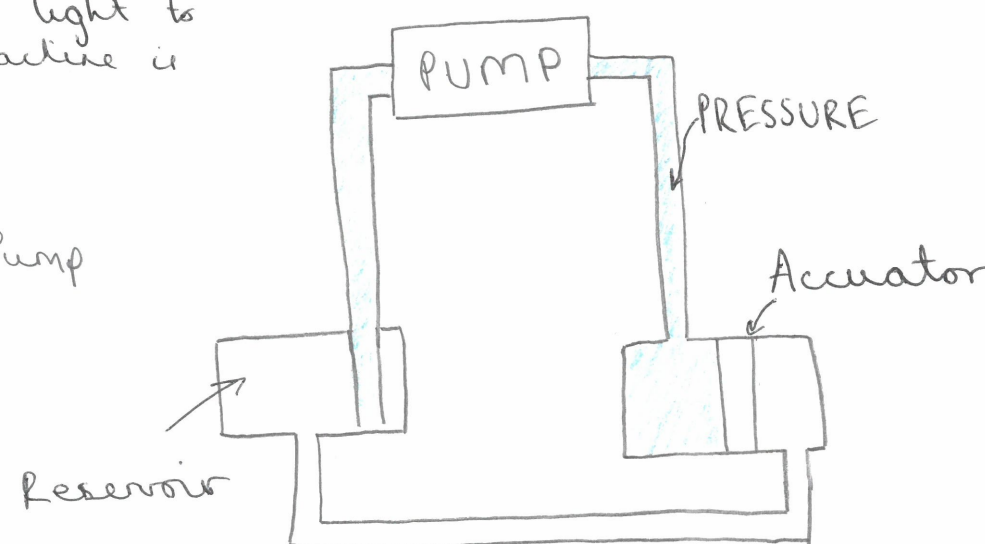
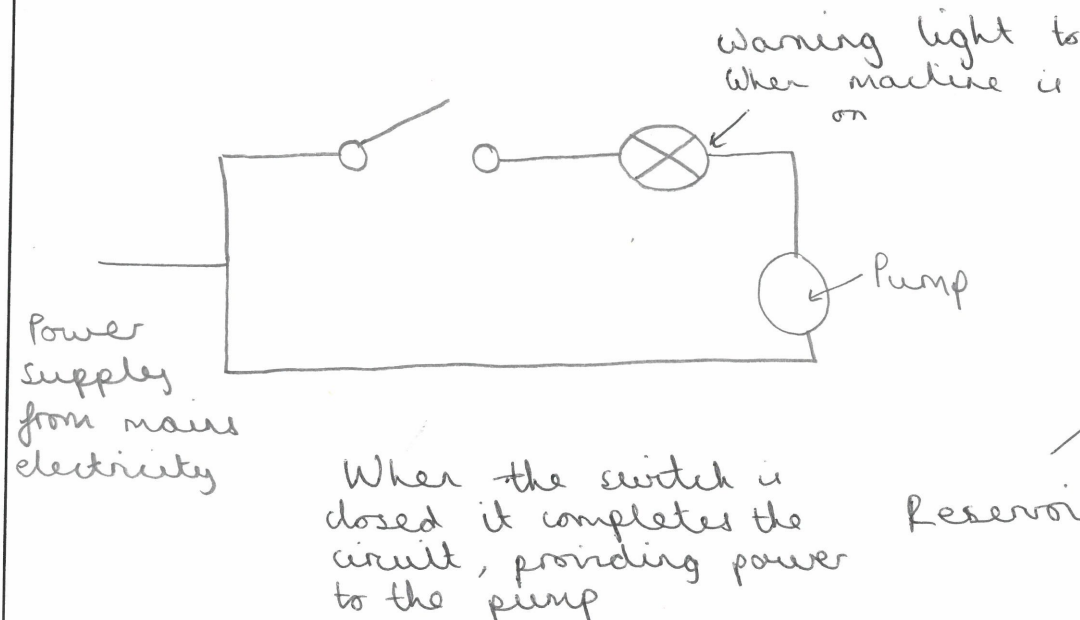
Question 5 :

Mechanical log splitter



The main shaft is hinged to allow it to fold inwards for more compact storage

Circuitry and hydraulic system:



- This design features a hydraulic log splitter

- The hydraulic pump pushes a wedge through the log, forcing it to split in half

- The main shaft fits logs up to 300 mm in length & diameter - the side pieces can then be tightened to secure the log in place

- The wedge will be made from (sand casted) High carbon steel to prevent it from going blunt

- The rest of the machine will use mild steel - due to its strength, the weight will also help with stability

- This pressure drives the wedge through the log

- The hydraulic system eliminates the need for an axle

This is a good, clear response to this question. The applicant has considered the power needed to split a log, so has included hydraulics, along with details of how the hydraulic system would work. The applicant has also provided details about how the log can be held in the machine but has not realised that this would work against the movement needed for the log to actually split. Folding for the purposes of storage has been considered, which is good. It is not clear why the top of the device has been coloured blue, nor has it been labelled, which leaves the marker guessing ... Is it the reservoir for the hydraulic oil?

Name:

School:

Section
A or B:

B

Question
Number: