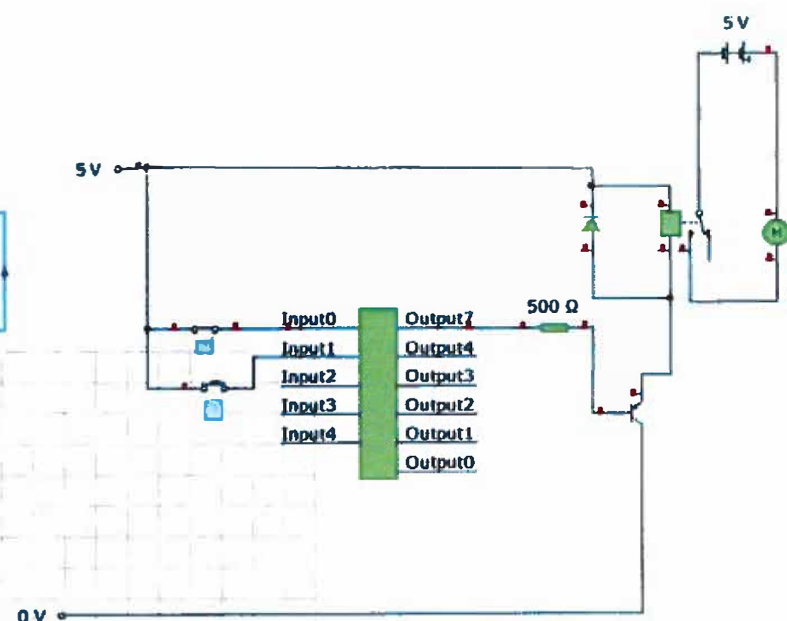
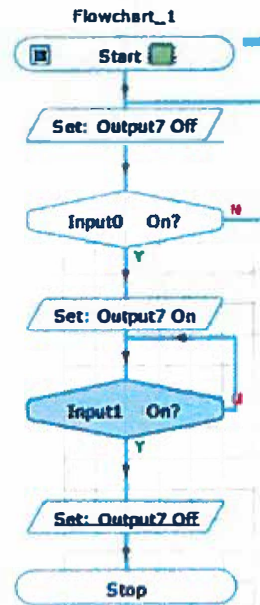


Candidate 3 evidence



```
BASIC Viewer
Flowchart_1
1 main:
2 label0:
3   Switch off 5
4   if Input0 is On then label1
5   goto label0
6 label1:
7   Switch on 5
8 label2:
9   if Input1 is On then label1
10  goto label2
11 label3:
12  Switch off 5
13  end
14
15
```

task 1A,
19/02/19

Worksheet 1b

Planned test	Expected result	Initial test result	Amended test result
<p>Test 1</p> <p>Turn on the master switch.</p>	<p>The relay should activate and the motor should start turning.</p>	<p>motor started The motor did not turn</p>	<p>motor started Added battery at the top after the relay</p>
<p>Test 2</p> <p>Turn on the master switch and then after a few seconds turn on the position sensor.</p>	<p>The motor should start turning then slow down and stop.</p>	<p>did slow down however the program doesn't allow speed so it was due to the natural slowing down of the motor</p>	<p>none needed.</p>
<p>Test 3</p> <p>Turn on the master switch and then turn off the master switch.</p>	<p>The motor should start turning then slow down and stop.</p>	<p>stopped</p>	<p>none needed</p>

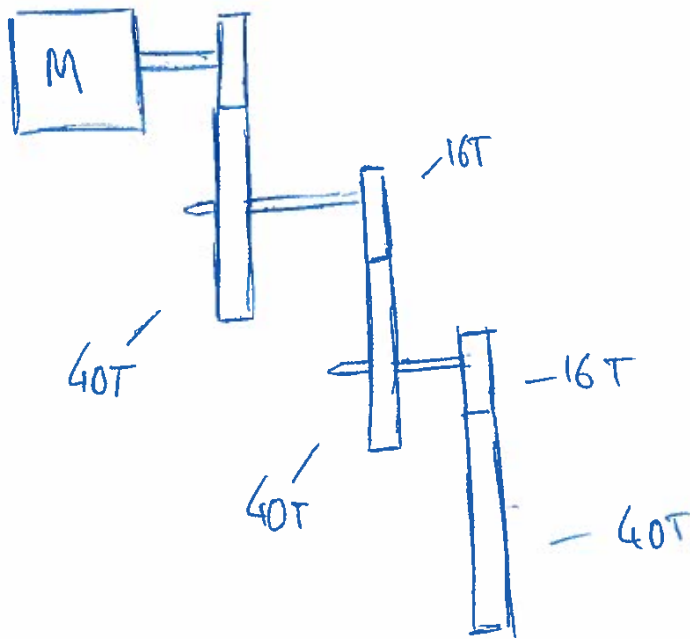
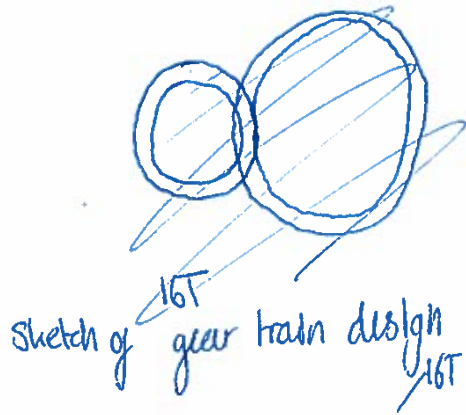
(5 marks)

Worksheet 1e

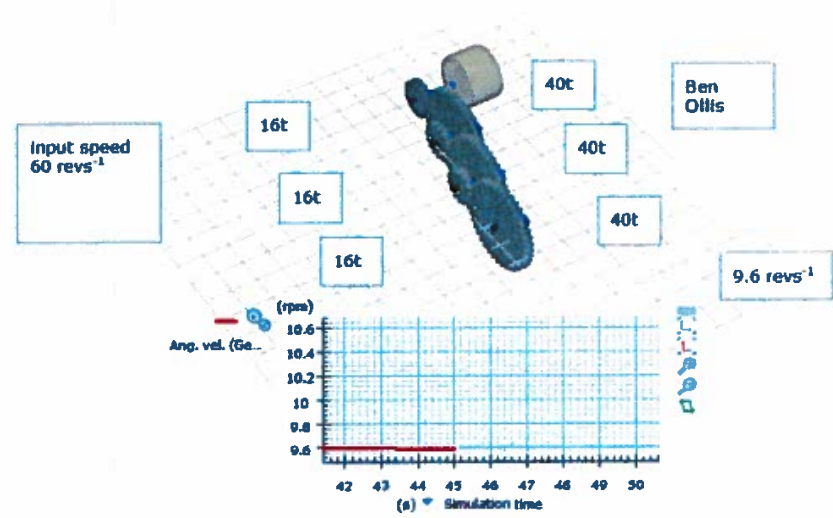
Specification point	Met? Y or N	Description
i	N	motor did not turn on so i added a battery into the system that would turn the motor on when needed.
ii	Y	the motor starts turning then slows down and finally stops when the button is pressed.
iii	Y	the motor starts then slows down to a halt.
Improvement		means it will actually work works .

(4 marks)

Question 2A



2B



Model: gear train

Worksheet 2c

Planned test	Input speed	Output speed	Required velocity ratio	Actual velocity ratio
Measure the input speed and output speed of the gear system and calculate the actual velocity ratio.	60 revs^{-1}	9.6 revs^{-1}	At least 40 (40 : 1)	50.4 revs^{-1}

(2 marks)

Worksheet 2d

Specification point	Met? Y or N	Description
i	Y	the output speed is 9.6 revs^{-1} 50.4 revs^{-1} away from the starting 60 revs^{-1}
ii	Y	very small is circuit consisting of 6 gears and a motor. $3 \times 60t + 3 \times 16t$

(2 marks)

Worksheet 3a

Specification point	Planned test	Expected result
i	when the stage is down and the up button is pressed	The piston should outstroke and the stage will move up.
	When the stage is down, push the up button without the safety guard being activated.	the stage will rise just
ii	press either button 1 on the stage or button 2 on ground level.	The piston should instroke and the stage will move down.
	When the stage is up, activate down button 2 on ground level.	the stage will go down.

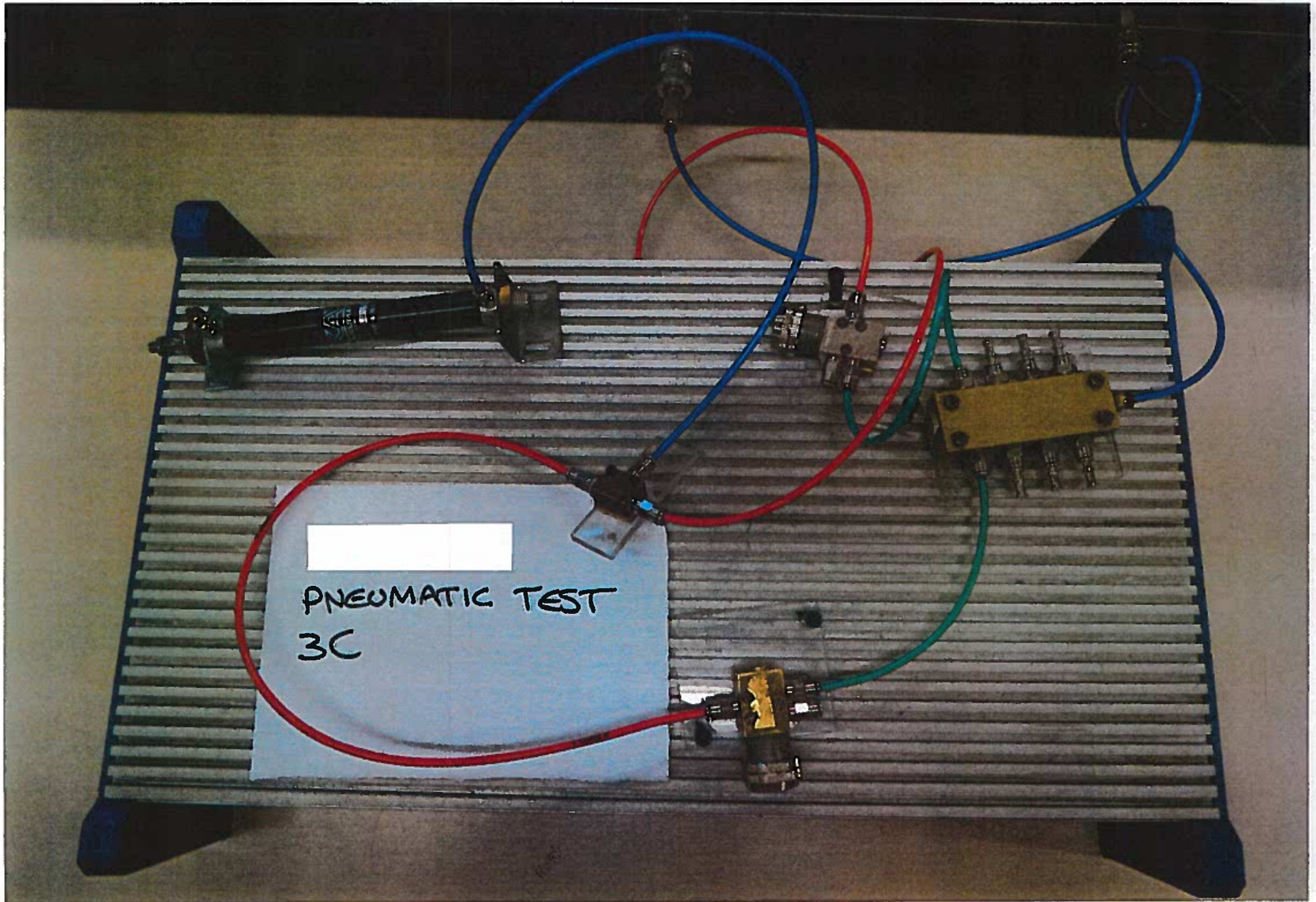
(4 marks)

Worksheet 3b

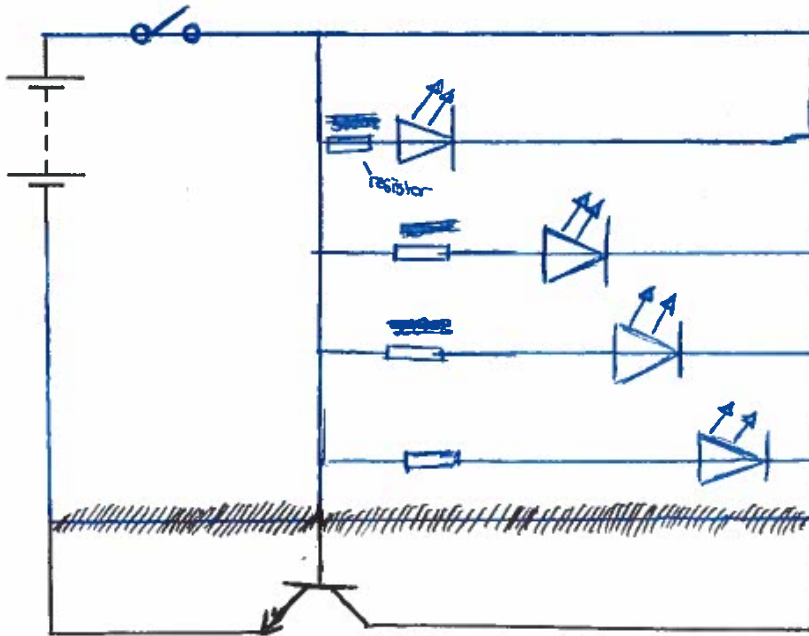
Improvement	Slow down the increase in height and decrease in height.
Justification	<p>Safety purposes and could be used for dramatic affect.</p> <p>these stage will be rising up rising up at a very fast or as fast as the pistons piston the walk so a speed controller can control the outstroke/ instroke speed.</p>
Components required	Speed controller.

(3 marks)

MC



Worksheet 4



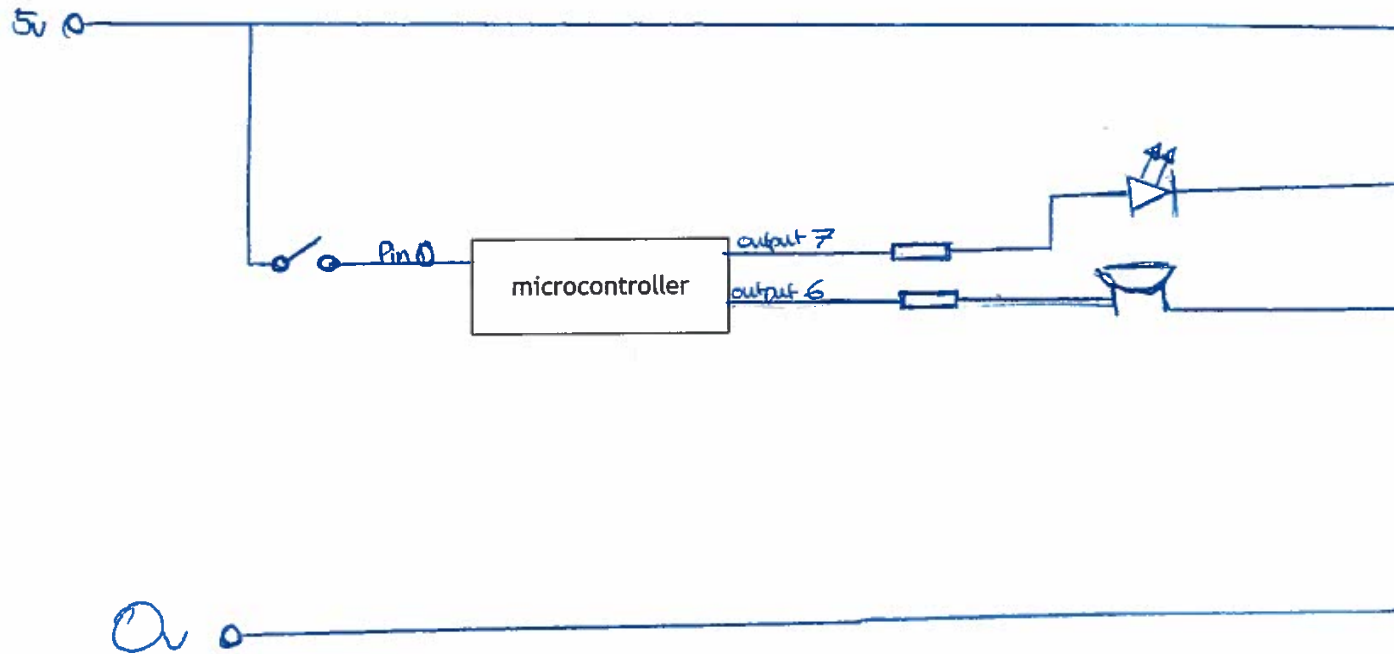
(4 marks)

Worksheet 5a(i)



(2 marks)

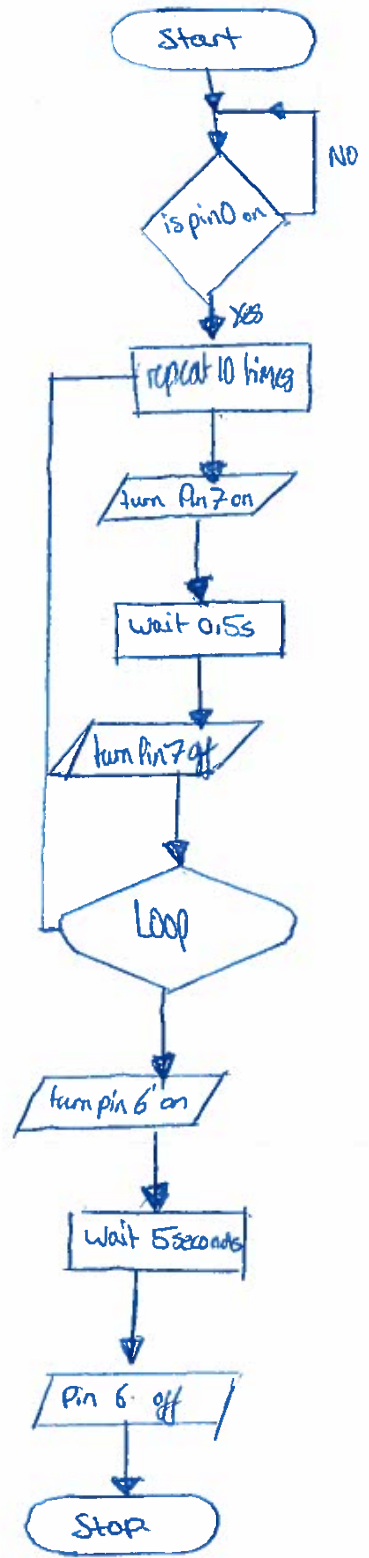
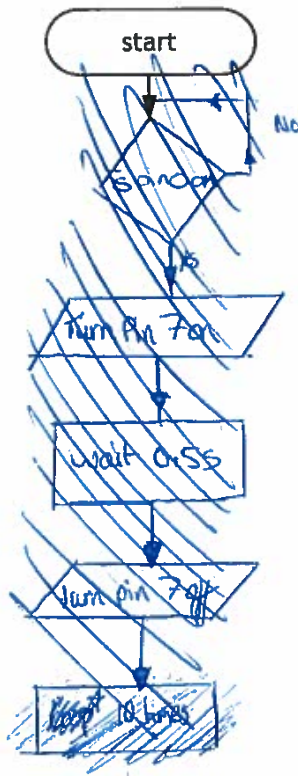
Worksheet 5a(ii)



(5 marks)

Worksheet 5b

~~Repeat~~



(4 marks)