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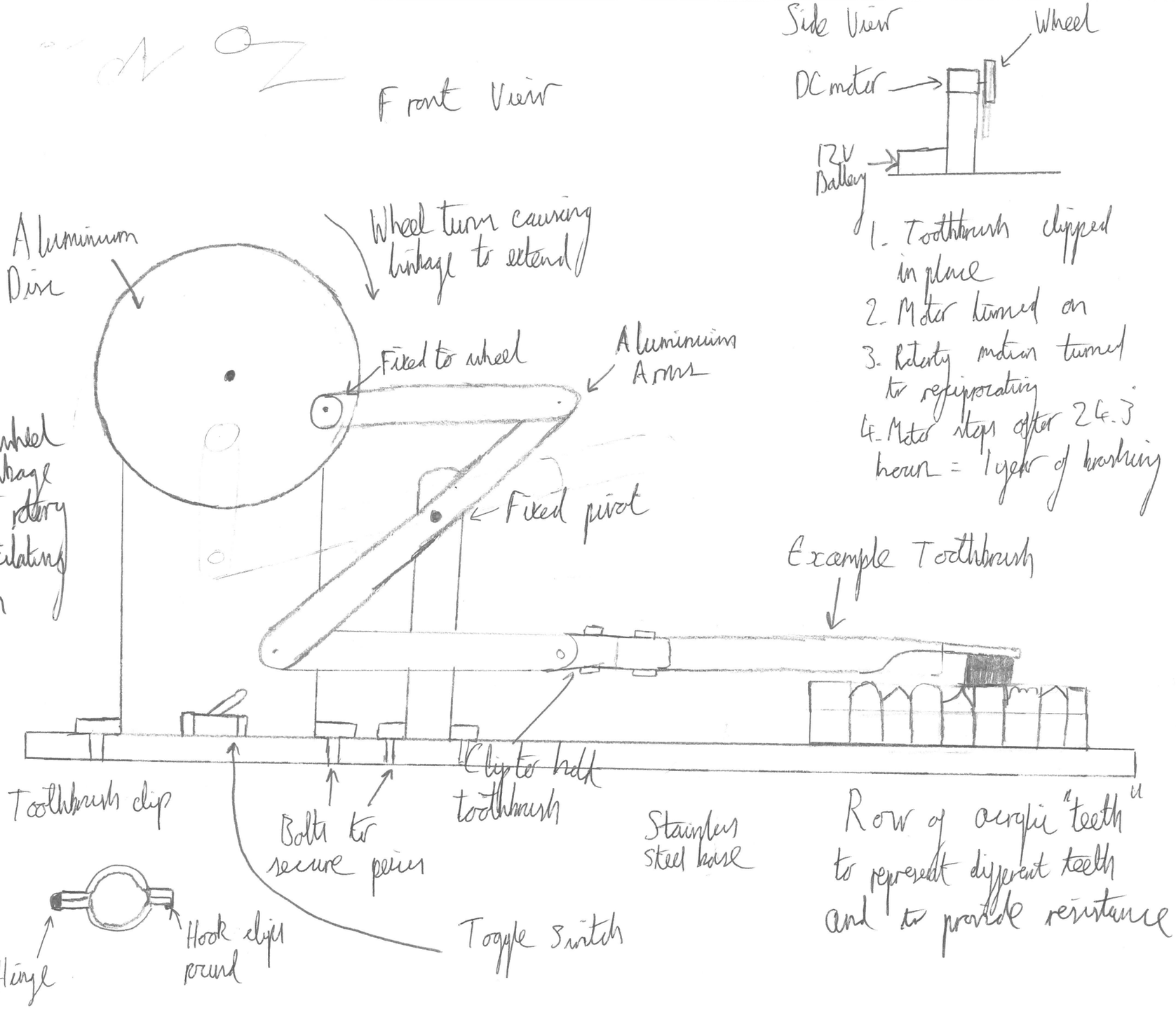
5



1. Toothbrush clipped in place
2. Motor turned on
3. Rotary motion turned to reciprocating
4. Motor stops after 24.3 hours = 1 year of brushing

$4 \times 365 = 1460$

$1460 \div 60 = 24.3$

1 year = 24.3 hours

This is an example of where a clear yet simple response to the question can score high marks. The candidate has utilised a bell crank to provide reciprocating motion to the toothbrush which brushes realistic 'teeth'. The candidate has also found time to add a 3D representation along with a simple flow chart and circuit diagram. All that's missing is lubrication for the toothbrush.

Name:	School:	Circle here the two questions you have answered in the exam: 1 2

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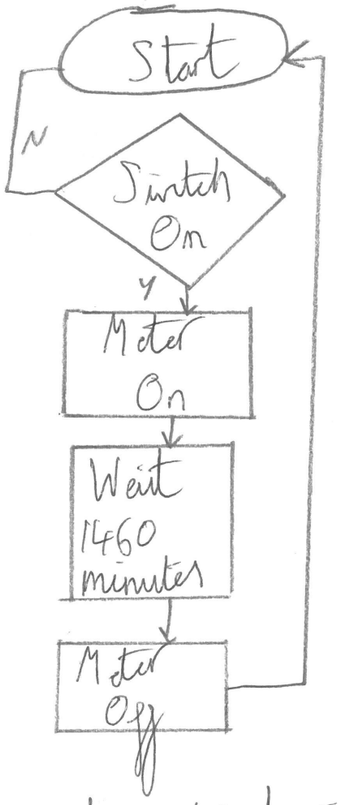
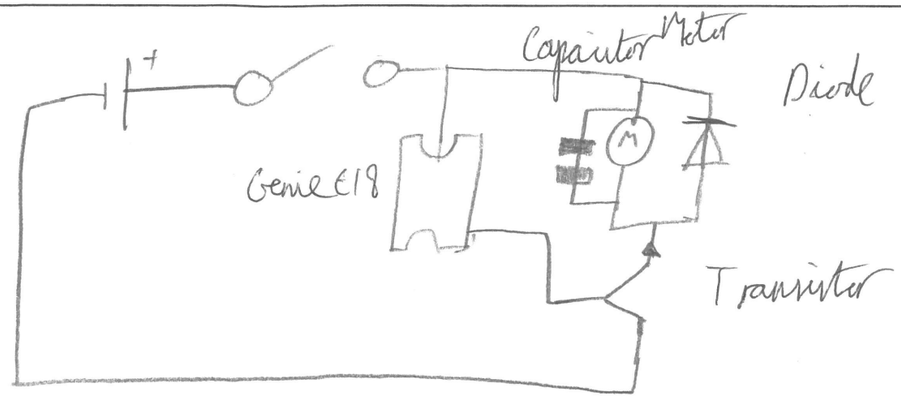
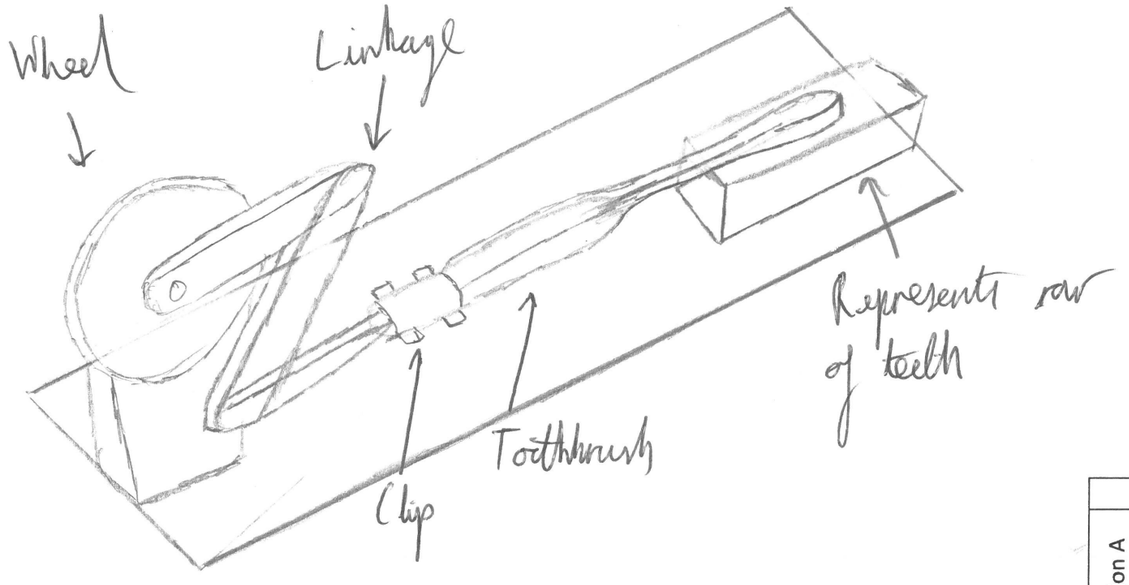


Flowchart to show sequence of events



Circuit design for the system



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Section A	Function and creativity of the 3 concepts	/30
	Technical knowledge & the quality of your explanations	/15
	Total for Section A	**/45**
Section B	Function of the Proposal	**/30**
	Materials, components and construction	**/15**
	Total for Section B	**/45**
	Communication	**/10**
	Total	**/100**

Name:	School:	Circle here the two questions you have answered in the exam: 1 2 3 4 5 6