

# Energy, Work & Power

## Question Paper

Course	CIE IGCSE Physics
Section	1. Motion, Forces & Energy
Topic	Energy, Work & Power
Difficulty	Medium

Time Allowed      10

Score                /7

Percentage        /100

## Question 1

A student is investigating the work required to pull a box containing some masses up a sloping wooden board. Fig. 4.1 shows the board and the box.

Plan an experiment to investigate how the work required to pull the box up the slope depends on the mass of the box and its contents.

Work done is calculated using the equation:

$$\text{work done} = \text{force} \times \text{distance moved in the direction of the force.}$$

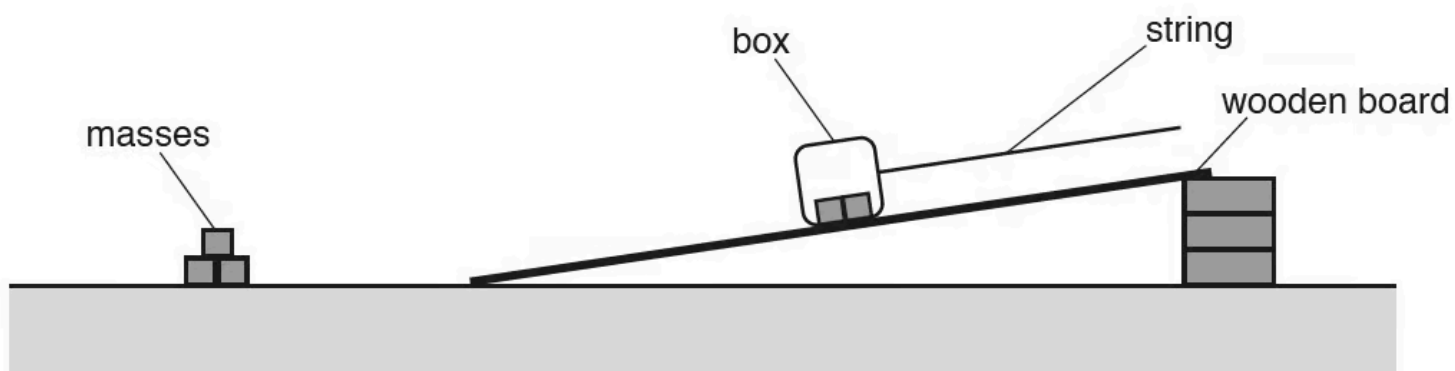
The following apparatus is available to the students:

- a wooden board
- a box with a length of string attached
- a selection of masses that fit in the box
- a metre rule
- an electronic balance.

In your plan, you should:

- list any other apparatus that you would use
- explain briefly how you would carry out the investigation, including the measurements you would take
- state the key variables that you would control
- draw a suitable table, with column headings, to show how you would display your readings (you are **not** required to enter any readings in the table)
- explain how you would use the results to reach a conclusion.

You may add to the diagram if it helps your explanation.



**Fig. 4.1**

[7 marks]