Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : 2_Motion and Forces

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

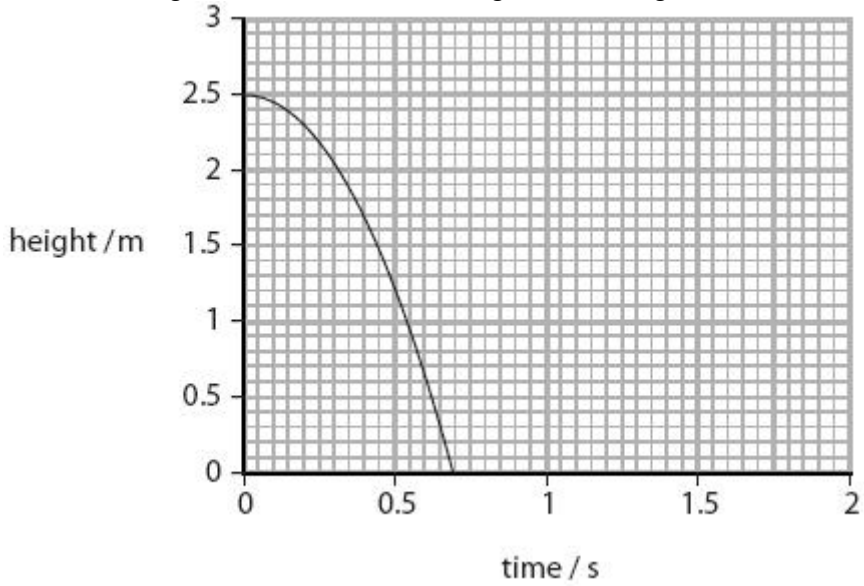
Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Q1.

The man in the photograph balances a ball above the ground.



He lets the ball fall.
He starts a timer at the same time.
The graph shows how the height of the ball above the ground changes with time.



(i) From the graph, state the height of the ball above the ground when the timer was started.

(1)

.....

(ii) From the graph, state the time taken for the ball to reach the ground.

(1)

.....

(iii) The ball bounces back to a height of 1.9 m.
Continue the line on the graph to show this.

(3)

(iv) Explain why the ball does not bounce back to its original height.

(2)

.....

.....

Downloaded from www.merit-minds.com

.....

.....

Q2.

Figure 4 shows two students investigating their reaction times.

Student B supports his left hand on a desk.

Student A holds a ruler so that the bottom end of the ruler is between the finger and thumb of student B.

When student A releases the ruler, student B catches the ruler as quickly as he can.

The investigation is repeated with the right hand of student B.

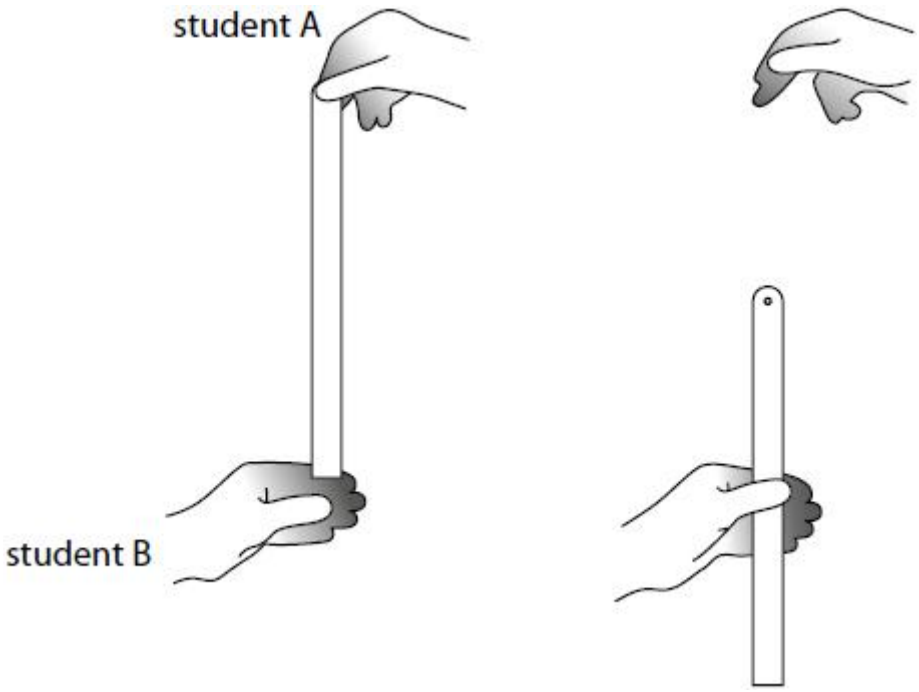


Figure 4

(a) The students took five results for the left hand and five results for the right hand.

Figure 5 shows their results.

which hand	distance dropped (cm)					
	trial 1	trial 2	trial 3	trial 4	trial 5	average
left	10.1	25.5	18.4	14.6	11.7	14
right	17.5	16.1	19.4	18.6	20.2	.....

Figure 5

(i) Calculate the average distance dropped for the right hand.

Downloaded from www.merit-minds.com

Give your answer correct to 2 significant figures.

(2)

distance = ... cm

(ii) Calculate the average time for the left hand.
Use the equation

$$\text{time}^2 = \frac{\text{distance}}{500}$$

(2)

average time = ... s

(b) Explain whether any of the readings are anomalous.

(2)

.....

.....

.....

.....

(c) Give **two** ways that the students can improve the quality of their data other than ignoring anomalous results.

(2)

1 .....

.....

2 .....

.....

(d) Describe how the students could develop their investigation to investigate how reaction time changes with another variable.

(2)

.....

.....

.....

.....

Downloaded from www.merit-minds.com

.....

.....

(Total for question = 10 marks)

Downloaded from www.merit-minds.com