



**Science Revised Syllabus
Junior Certificate
Higher Level**

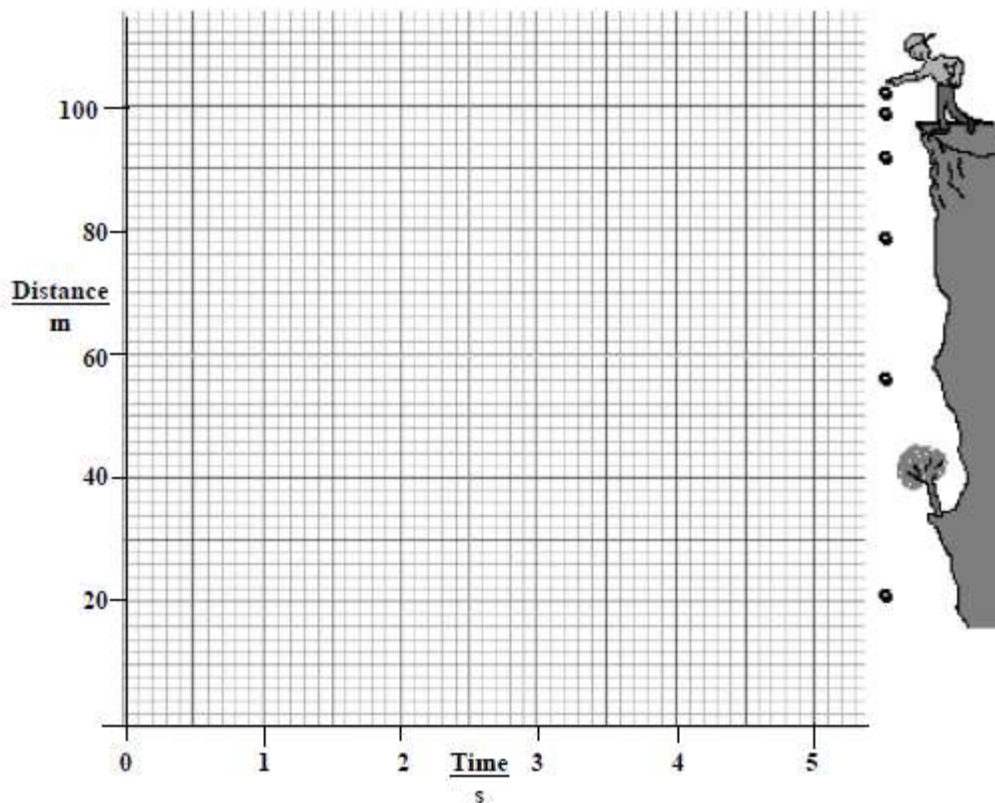
**Past Exam Questions on
P Distance, Speed and Time**

Q9 Part (a) 2011

- (a) A stone was dropped from the top of a cliff and the distance that it fell was measured at the intervals of time as given in the table below.

Distance (m)	0	5	20	45	80	100
Time (s)	0	1	2	3	4	4.5

- (i) Draw a graph of distance against time in the grid below. A smooth curve through the plotted points is required. (9)



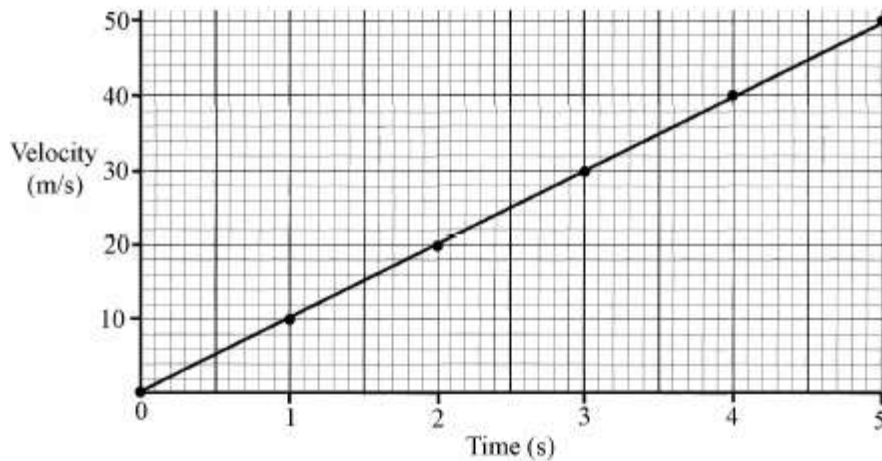
- (ii) Use the graph to find how far the stone had fallen in 3.5 s. (3)

- (iii) Calculate the average speed of the falling stone between the second and the fourth second. Give the unit with your answer. (6)

- (iv) In this experiment is distance fallen directly proportional to time? Justify your answer. (6)

Q9 Part (c) 2009

- (c) A stone was dropped from the top of a tall cliff. The stone's approximate velocity was measured each second as it fell. The data collected during this experiment is given in the graph.



- (i) Define *velocity*. (6)

- (ii) Use data from the graph to *estimate the acceleration of the stone* as it fell. Give the *units of acceleration* with your answer. (6)

- (iii) Name the *force* that caused the stone to fall. (3)

Name _____

- (iv) The stone had a mass of 2 kg.
What was the *weight* of the stone on earth? Give the unit. (6)
