

GCE Physics 2008 marking grids A2

A: Planning

Ref	Criterion	Mark
P1	Identifies the most appropriate apparatus required for the practical in advance	
P2	Provides clear details of apparatus required including approximate dimensions and/or component values (for example, dimensions of items such as card or string, value of resistor)	
P3	Draws an appropriately labelled diagram of the apparatus to be used	
P4	States how to measure one quantity using the most appropriate instrument	
P5	Explains the choice of the measuring instrument with reference to the scale of the instrument as appropriate and/or the number of measurements to be taken	
P6	States how to measure a second quantity using the most appropriate instrument	
P7	Explains the choice of the second measuring instrument with reference to the scale of the instrument as appropriate and/or the number of measurements to be taken	
P8	Demonstrates knowledge of correct measuring techniques	
P9	Identifies and states how to control all other relevant quantities to make it a fair test	
P10	Comments on whether repeat readings are appropriate for this experiment	
P11	Comments on all relevant safety aspects of the experiment	
P12	Discusses how the data collected will be used	
P13	Identifies the main sources of uncertainty and/or systematic error	
P14	Plan contains few grammatical or spelling errors	
P15	Plan is structured using appropriate subheadings	
P16	Plan is clear on first reading	
	Total marks for this section (16)	

B: Implementation and measurements

Ref	Criterion	Mark
M1	Records all measurements with appropriate precision, using a table where appropriate	
M2	Readings show appreciation of uncertainty	
M3	Uses correct units throughout	
M4	Refers to initial plan while working and modifies if appropriate	
M5	Obtains an appropriate number of measurements	
M6	Obtains measurements over an appropriate range	
	Total marks for this section (6)	

C: Analysis

Ref	Criterion	Mark
A1	Produces a graph with appropriate axes (including units)	
A2	Produces a graph using appropriate scales	
A3	Plots points accurately	
A4	Draws line of best fit (either a straight line or a smooth curve)	
A5	Derives relation between two variables or determines constant	
A6	Processes and displays data appropriately to obtain a straight line where possible, for example, using a log/log graph	
A7	Determines gradient using large triangle	
A8	Uses gradient with correct units	
A9	Uses appropriate number of significant figures throughout	
A10	Uses relevant physics principles correctly	
A11	Uses the terms precision and either accuracy or sensitivity appropriately	
A12	Discusses more than one source of error qualitatively	
A13	Calculates errors quantitatively	
A14	Compounds errors correctly	
A15	Discusses realistic modifications to reduce error/improve experiment	
A16	States a valid conclusion clearly	
A17	Discusses final conclusion in relation to original aim of experiment	
A18	Suggests relevant further work	
	Total marks for this section (18)	

Total marks for this unit (40)	
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