

**SECONDARY SCHOOL ANNUAL EXAMINATIONS 2009
MARKING SCHEME FORM 4**

SECTION A – 40 marks					
No	Answer			Marks	Additional Guidelines
1.	Quantity	Symbol	Units	1 1 1 1 1 1 1 1	Accept Joules Accept Amps or Amperes
	Specific heat capacity	c	J/kg °C		
	Heat Energy	H	J		
	Voltage	V	V		
	Charge	Q	C		
	Current	I	A		
	Distance	s	m		
	Final Velocity	v	m/s		
	Acceleration	a	m/s ²		
2 a)	alternating current			1,1	
2 b)	4.8A			1,1	1 mark for correct working 1 mark for correct unit
2c)	5A			1	
2d)	Correct labels			1,1,1	
3a)	polythene			1	
3b)	Positive charges on LHS, negative charges on RHS			1,1	1 mark for correct placing of charges 1 mark for equal amount of charges
3c)	Electron flow down to earth			1	
3 d)	Positive			1	
3 e)	Conductor remains neutral			1	
3f)	positive, negative			1,1	
4a)i)	Due to inertia which resists changes in motion			1	Accept equivalent answer
4a)ii)	backward			1	
4 b)i)	1600kgm/s			1	Accept 1600
4b)ii)	0 kgm/s			1	Accept 0
4b)iii)	-1600 kgm/s			1	Accept 1600
4 b)iv)	-3200N			2	1 mark for correct unit Accept 3200N
4 c)	It prevents the person from moving forward and hurting himself			1	Time to stop is increased so force on person is decreased
5a)	0m/s			1	Accept 0
5b)	5m/s			1	Accept 5
5c)	0.5m/s ²			2	1 mark for correct working 1 mark for correct unit
5d)	25m			2	1 mark for correct working 1 mark for correct unit
5 e)i)	terminal			1	

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5 e)ii)	They are equal	1	
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SECTION B – 45 marks			
No	Answer	Marks	Additional Guidelines
6a)	Graph	5	1 mark correct scale 1 mark correct axes 1 mark correct points 1 mark title 1 mark correct drawing
6b)i)	Correct label	1	
6b)ii)	Correct label	1	
6c)i)	0m/s	2	
6c)ii)	25m/s	2	
6c)iii)	50s	2	
6c)iv)	0.5m/s ²	2	1 mark correct working 1 mark correct answer
7a)i)	series	1	
7a)ii)	3V	2	1 mark correct working 1 mark correct answer
7a)iii)	7V	2	1 mark correct answer 1 mark correct unit
7a)iv)	14Ω	2	1 mark correct working 1 mark correct answer
7b)i)	Correct labels	2	
7b)ii)	decrease, increases	1,1	
7b)iii)	increase, decreases	1,1	
7b)iv)	No reading, plastic is an insulator	1,1	
8a)i)	radiation	1	
8a)ii)	conduction	1	
8a)iii)	convection	1	
8a)iv)	bad	1	
8a)v)	absorbers	1	
8a)vi)	heat losses	1	
8b)i)	30°C	2	
8b)ii)	1 260 000J	3	1 mark correct working 1 mark correct answer 1 mark correct unit
8b)iii)	Lower Higher	1 1	
8b)iv)	So that all the water in the container will have constant temperature	2	Accept reasonable answer

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