



Rewarding Learning

General Certificate of Secondary Education
2011–2012

Science: Double Award (Modular)

Forces and Energy

End of Module Test

Foundation Tier

C

[GDC01]

WEDNESDAY 29 FEBRUARY 2012

9.30 am–10.15 am

**MARK
SCHEME**

			AVAILABLE MARKS
9	(i) horizontal line from (50, 200) to (100, 200) [1] line from (100, 200) to (200, 0) [1]	} allow ± 1 sq tolerance	[2]
	(ii) 400 (m) [1]		[1]
10	(a) 16 (mm)		[1]
	(b) line is straight		[1]
	(c) (i) Extension		[1]
	(ii) Total length = 36 mm (or 20 + 16) [1] Load = 7 (N) [1]		[2]
11	(a) momentum = mass \times vel [1] = 2000 \times 7 [1] = 14 000 (kgm/s) [1]		[3]
	(b) friction [1]		[1]
	(c) towards the centre (of the curve) [1]		[1]
12	(a) 500 (N)		[1]
	(b) Power = work done/time [1]		[1]
	= (500 \times 2)/1.5 [2] allow ecf from (a)		[2]
	= 666.7 [1] W [1]		[2]
			6
Total			50