



**Oxford Cambridge and RSA Examinations**  
**General Certificate of Secondary Education**

**PHYSICS**  
PAPER 5  
FOUNDATION TIER

**1982/5**

**MARK SCHEME**

**Specimen Paper 2003**

Qn	Expected answer	Marks	Additional guidance
1 (a)	sound (1) electrical (1) light (1)	3	
(b)	vibrate (1) increases (1) magnetic field (1) sound (1)	4	
(c) (i)	electromagnetic wave/ (short wavelength) radio waves.	1	
(c) (ii)	cooking	1	
(d) (i)	internet/books/speeches at conferences/scientific magazines/journals	1	
(ii)	Any <b>two</b> from:  provide information to other scientists (1) provides information to government (1) provides information to the general public (1) evaluation by other scientists/AW (1) review by other scientists/AW (1) so they get their work checked (1)	2          <b>(12)</b>	

2 (a)	less people use it/less demand	1	
(b)	more energy needed to raise temp of concrete (1) for same temp rise / per deg C (1)	2	shc is greater = 2 marks
(c)	0.1	1	
(d)	76 (kg)	1	
(e)	bigger density so bigger mass in the same space (1) a bigger mass, so would store more energy (1) bigger shc, so <u>stores</u> more energy (1) bigger shc so retains energy longer (1)	2          <b>(7)</b>	any <b>two</b> .

Qn	Expected answer	Marks	Additional guidance
3 (a) (i)	spring is compressed (1)	1	
(ii)	bigger force would make bigger compression (1) no room to compress that much / scale too short for that much force (1)  <b>QWC=1.</b> This mark should only be awarded if the answer given attempts to address the question and the quality of the description makes the meaning clear.	2  1	
(b) (i)	straight line graph	1	
(ii)	proportional	1	
(c) (i)	spring constant = gradient or $k = F/x$ (1) = 4 (N/cm) (1)	2	
(ii)	400 (N/m)	1	allow ecf
(d) (i)	25 (N)	1	
(ii)	forces must balance / upward force = downward force (1) 25N + Tom's reading = 50 N, so Tom's is 25N (1)	2	accept weights shared equally
(e) (i)	0.8 (Hz)	1	
(ii)	resonance (1) (frequency of) vibration same as natural frequency (1)	2	
(iii)	change speed/slow down more/speed up more/change springs/change mass	1	
		<b>(16)</b>	

