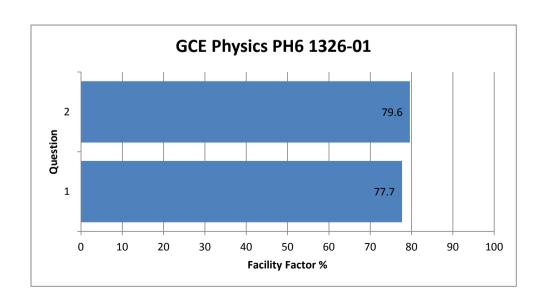


## WJEC 2014 Online Exam Review

## GCE Physics PH6 1326-01

All Candidates' performance across questions

?	?	?	?	?	?	?	_
Question Title	N	Mean	SD	Max Mark	F F	Attempt %	
1	1518	19.4	3.7	25	77.7	99.9	←
2	1517	19.9	3.2	25	79.6	99.9	



		-
(c)	The temperature coefficient of resistance, $\alpha$ , of copper can be found using the equation:	
	$R_{\theta} = \alpha  R_0 \theta + R_0$ where: $R_0 = \text{Resistance at 0 °C}$ $R_{\theta} = \text{Resistance at temperature } \theta ^{\circ} \text{C}$ $\theta = \text{Temperature coefficient of resistance}$	
	Explain whether or not your graph is in agreement with the above equation. [3	ı
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		-
		.

The temperature coefficient of resistance,  $\alpha$ , of copper can be found using the equation:

$$R_{\theta} = \alpha R_{0}\theta + R_{0}$$

where:

 $R_0$  = Resistance at 0 °C

 $R_{\theta}^{-}$ = Resistance at temperature  $\theta$  °C

 $\theta$  = Temperature /°C

 $\alpha$  = Temperature coefficient of resistance

Explain	whether	or not	your graph	is is	in agreement	with the	above equation.	
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 $\theta$  = Temperature /°C  $\alpha$  = Temperature coefficient of resistance Explain whether or not your graph is in agreement with the above equation. [3] = 2 Ro. Soitis in agreement with this equation

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	Explain w	hether or not	your graph is in a	greement with the	e above equat	tion.	[3]
5.	Yes	because	the graph	is linear	and do	ent pass	
* 4 y (	with	So we ho	we relation	shio u = m	x + c t	he origin	
	ė	u - Ra	x = Tempera	iture 0	2000 S		
8		y	uth y-axi			)	
1			m- ~Rs	, , , , , , ,			

(c)	The temperature coefficient of resistance, $\alpha$ , of copper can be found using the equation:	onl
	$R_{\theta} = \alpha  R_0 \theta + R_0 \label{eq:Rtheta}$ where:	
	$R_0$ = Resistance at 0 °C	
	$R_{\theta}$ = Resistance at temperature $\theta$ °C	
	θ = Temperature /°C	
	$\alpha$ = Temperature coefficient of resistance	
	Explain whether or not your graph is in agreement with the above equation. [3]	
	Yes because the graph is linear and doesn't pass	
.x. <del>/.</del>	with so we have relationship y = mx + c the origin	
	y=R@ x=Temperature 0	
	C = intercept with y - axis - Rat 0°C (Ro)	
	and gradient m= alo	

(c) The temperature coefficient of resistance,  $\alpha$ , of copper can be found using the equation:

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where:

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 $\stackrel{\circ}{R_{\theta}}$  = Resistance at temperature  $\theta$   $^{\circ}$ C

 $\theta$  = Temperature /°C

 $\alpha$  = Temperature coefficient of resistance

	ur graph is in agreement with the above equation.	[3]
1R)=10R00 HR0	Yes it is as the graph is a straight	
y = m (x/+) c)	line and the exportion is theorised into	
	the y=mx+c form. Line his a y-intercept	-
	above the origin. Positive value for greatient	
	also indicated by the equation.	

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(c) The temper	erature coefficient of resistance, $lpha$ , of copper can be found using the equa	ation:	,
where			
U	Resistance at 0°C	1	
•	Resistance at temperature $ heta^\circ C$ Temperature /°C		
	Temperature coefficient of resistance		
		503	
	hether or not your graph is in agreement with the above equation.	[3]	
Ra-laryo	1/1/Rol Yes it is as the graph B a stought		$\bigcirc$
(y)=\m (x		-	
3/ 0.0	the y=mx+c form. Line his a y-interept	<u> </u>	
	above the origin. Positive value for greater		

also indicated by the equation.

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(b)	Write a plan of how you will obtain sufficient readings to investigate this relationship. [4	only
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(b) Write a plan of how you will obtain sufficient readings to investigate this relationship. [4]  were measure the cotton throad's length  Let the Muter ruler at equilibrium with the distance	Examiner only
between two vertical cotton threads is 20 cm. Rotate the lover at its unter of mass and take measurement of time.	
Then increase the distance to 30 cm, 40 cm, 50 cm, 60 cm. 70 cm of each distance and take readings of time. Repeat reading > I choose this	
range of measurement to take the significant of change in time	
Repeat readings twice to reduce uncertainty.	

(b) Write a plan of how you will obtain sufficient readings to investigate this relationship. [4]	Examiner only
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Repeat readings twice to reduce uncertainty.	

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1. Attach a metre ruler with a G-dip make the	
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2. Use two wives connet other metre ruler and make	
they are vertical to each other 3 Rotate the mid- point and use the stop watch measure the period when	,
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the distance of two vertical cotton threads are	
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the distance of two vertical cotton threads are	
20 cm, 30 cm, 40 cm, 50 cm, 60 cm, 0	
respectively 4 Repeat the pocess to get mean	* *
value of period	

(c)	Using the apparatus, take sufficient measurements to obtain a value for $n$ . Draw a table to show your results clearly. <b>The value of</b> $d$ <b>should be in centimetres</b> . Include the resolution of the apparatus used. [5]	Examiner only

(c) Using the apparatus, take sufficient measurements to obtain a value for n. Draw a table to show your results clearly. **The value of** d **should be in centimetres**. Include the resolution of the apparatus used. [5]

istace theen	In mean reading					
ipporting reads (d)/cm	threads	reading	reading 2.	reading 3	Mean rading	-M of oscillation
20.0	3 • OO	4,13	4.75	4.16	4015	1-42
30=0	3-40	2.66	2.62	2.72	2-67	Ø: 982
			**	,		The state of the s
40.0	3.69	1.37	1.084	197	1.93	O: 60
	***************************************	,				0.658
50.0	3.9	1-16	1.50	1.50	1.49	0.399
	March sharement to the section of the section					3
60.0	4.10	1.31	1.30	1-35	1.32	0.278

(c) Using the apparatus, take sufficient measurements to obtain a value for n. Draw a table to show your results clearly. **The value of** d **should be in centimetres**. Include the resolution of the apparatus used. [5]

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	3-00	4,13	4.75	4.16	4015	1-42			
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40.0	3.69	1.37	1.84	1.97	1.93	0° 66			
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	d/cm	T.18	T2/s	T/s	Ind	6T	A CONTRACTOR OF THE CONTRACTOR	
	20	3.71	3.52	3.62	3.00	1.29	Terror and the second s	
	30	241	2.51	7.95	3.40	0.90		
	HD	2.0	1.80	1.90	3.69	0.6H		
	50	1.63	1.61	1.62	3.91	0.48	961	
	60	1.62	1.40	151	4.09	0.48		
	70	0-21		H	4.15	0.54	Adaman	
		1.00	1-10	1.05	,	0.05	. 1	,
	meter i	uler:	0.10	m (1	mm )		.,	
stop watch: O.Ols								

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(c) Using the apparatus, take sufficient measurements to obtain a value for n. Draw a table to show your results clearly. **The value of** d **should be in centimetres**. Include the resolution of the apparatus used.

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	dlan	T.13	Tals	<b>T</b> /s	Ind	l hT		
****************	20	3.71	3.52	3.62	3.00	1.29		
	30	241	2.51	2.46	3.40	0.90	,	
	HD	2.0	1.80	1.90	3.69	0.64	,	
	50	1.63	1-61	1.62	3.91	0.48	32	L
	60	1,62	1.40	1.61	4.09	0.43	s	
And the second second	70	0-04		出	H. 25	0.54		
	1	1.00	1.10	1.05		0.05	, 1	
		alle de de ce q	1×,×, , , , , , ,	m (11	5 M.S. J.	<u> </u>		
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Using the apparatus, take sufficient measurements to obtain a value for n. Draw a table to show your results clearly. The value of d should be in centimetres. Include the resolution of the apparatus used. [5] T(s) ± 0.015 11 1, 3.94 4.09 20.0 4.06 4.03 3.00 1.39 30.0 2.78 2.62 267 2.60 3.40 0.982 40.0 2.13 1-99 1.85 3.69 2.00 0.683 1.56 50.0 1-56 1.53 1.60 3.91 0.445 60.0 1-31 1-25 1.19 1-25 4-09 0-223

Using the apparatus, take sufficient measurements to obtain a value for n. Draw a table to show your results clearly. The value of d should be in centimetres. Include the resolution of the apparatus used. [5] T(s) ± 0.015 13 1, 4.09 3.94 20.0 4.06 4.03 3.00 1.39 30.0 2.78 2.62 267 2.60 3.40 0.982 40.0 2.13 1-99 1.85 3.69 2.00 0.683 50.0 1.5.6 1-56 1.60 1.53 3,91 0.445 60.0 1-31 1.25 1.19 1.25 4-09 0-223

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