

NOVEMBER 2002

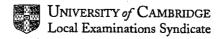
INTERNATIONAL GCSE

MARK SCHENE

MAXIMUM MARK: 80

SYLLABUS/COMPONENT: 0625/2

PHYSICS (CORE)



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QU.		SCHEME	TARGET GRADE	MARK
1.	(a)	(i) greater	F	M1
		(ii) P.E. (or equiv.) has increased OR work done lifting ca	se F	A1
	(b)	(i) greater	F	M1
		(ii) it is moving OR now has K.E. (or equiv.)	F	A1 4
2.	(a)	insulator	F	- B1
-	(b)	radiation	F	B1
,	(c)	conductor 444 44.	F	B1
	(d)	convection	F	B1 4
3.	(a)	arrow(s) clockwise	C	B1
	(b)	3 circles (by eye) around wire (need not be concentric, ignore other line)	nes) F	B1
		circles concentric with wire (by eye)	C "*	B1 3
4.	(a)	(i) 1020 - 610	F.	C1
		410 (g)	\mathbf{F}	A 1
		(ii) mass/volume	F	C1
		his (i)/500	F	C1
d		0.82 e.c.f.	F	A1
		g/cm ³	C	В1
		(iii) use measuring cylinder/pipette/narrower jug/bucett-s	e C	B1
	(b)	level shown below oil level	C	<u>B1</u> <u>8</u>

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5.	(a)	changes into a different nucleus/substance/isotope/nuclide OR loses/emits part of itself/particles	•	
		OR loses/emits an alpha/beta particle/gamma ray OR Mass decreases of different mass no.	F	B1
	(b)	evidence of 2 half-lives	C	C1
		56 (years)	C	A1. 3
6.	(a)	temperature Northing Else	F	B1
		solid turns to liquid OR liquid turns to solid	F .	B1
	(b)	last 2 both ticked	C	. B 1
	(c)	(i) horizontal straight line (nothing else)	F	B1
		(ii) B.P. correctly marked at horizontal line (condone extras) We on temp axis allow 100°C MUST BE CLEAR	C	B1 5
7.	(a)	rub them together	F	B1
	(b) Ied	G.L.E. OR pick up fluff etc OR crackles when discharged OR makes hair rise etc	F	B1
	(c)	region (or equiv.)	C	B1
		where electric charge experiences a force attraction repulsion	C	B1
	(d)	(i) moves away / repel/deflects / spins	F	M1
		(ii) like charges (NOT poles) repel	F	A1
	(e)	copper is a conductor (or similar comment) / copper can't be cha	C ged	B1 _7
8.	(a)	volt OR volts OR V	F	B1
Hust	(b)	resistance = p.d./current in any form, allow symbols or mixtue (allow B1 for just p.d./ current)	re 2F	B2
	(c)	4.7 = V/0.5	F	C1
		2.35 (V)	F	A1
*	(d)		F	B1
		(ii) decreases condone to zero q	F	B1
	(e)	10 - 4.7	C	C1
		5.3 (Ω)	C	A1 9

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	9.	(a)	avoid problems with echoes	С	B1
		(b)	time would have been too small to measure (with stopwatch) or to give a greater time interval or for accuracy	С	B1
		(c)	tape-measure OR trundle wheel OR metre rule		
			OR range-finder OR calibrated strides	\mathbf{F}	B1
		(d)	light travels fast/ instantaneously/ at 3 x 108 m/s	C	B1
•			sound travels slowly/ slower/ at 330 (±30) m/s	F	B1
41		(e)	(Note: "sound travels <u>much</u> slower than light" OR "light travels <u>much</u> faster than sound" "sound travels slower than light" etc gets B1, B0 speed = distance/time allow s = 2d/4	'scores B1,B1) C1
			238/0.7	F	C1
			340	F	A1
			m/s a.	C	B1
		(f)	effect of air movement OR take average OR repetition to che NOT "for a ccuracy", unless adequately explained	ck C	B1 10
	10.	(a)	(i) moves (ignore any direction) NoT vibrates	F	B1
allow answers			(ii) conductor experiences force in magnetic field	C	B1
in form of . current in) .		current-carrying conductor	C ···	B1
xporiences a			(iii) moves in opposite direction to (i)	F	В1
,		(b)	(i) commutator OR split ring allow commuter	С	B1
	<u>1</u> 2		Not slip lings brush OR contact Not spring	F	В1
			magnet OR pole	F .	B1
			(ii) commutator OR split ring e.c.f. from (i)	C	B1
			(iii) rotates other way / to the left rotates anticlockwise	F	B1 9

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11.	(a)	current causes magnetic field	F	B1
		iron reeds magnetised	C	B1
		magnetised in same direction OR adjacent ends opposite polar	rity C	B 1
		(ends)attract each other	C	B1
	(b)	temperature rises	F	B1
		resistance decreases	F	· B1
	i	eventually enough current to close relay	C	B1
		current flows in lamp circuit or equiv.	С	B1 _8
12.	(a)	(i) ray refracted down at A Condone dispersion; Mark worst rag	F	M1
		not below normal	C	A1
		refracted down at 2nd surface	F	B 1
		(ii) refracted or deviation	F	Bl
	(b)	violet greater refraction than red at A	F	B1
		2 rays diverging all the way to the screen from A condone repetition of errors in (i)	C	B1
	(c)	spectrum (or equiv.) OR colours OR rainbow	F a.	B1
	(d)	(i) X marked position of red	F	B1
		(ii) not in visible spectrum OR invisible	С	B1
増したも	# 1 T	(iii) any example of a suitable I.R. detector Not "IR/heat sensor/detector"	С	B1 10