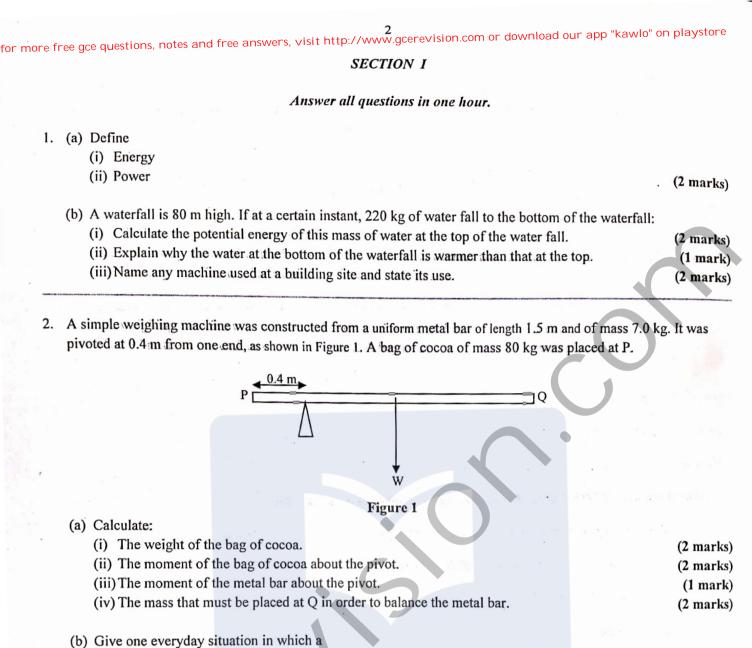
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0580 PHYSICS 2		SECTION 1		
		1 Alexandra and And	TO TRANSPORT	
CA	MEROON GENEI	RAL CERTIFICAT	TE OF EDUCATION	BUARD
	General	Certificate of Educa	tion Examination	(a) Define
				(i) {lag(2)
JUNE 2020	GCE	REVISIO	V ORDINA	ARY LEVEL
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			an L.O.	
Answer ALL question	IS: 0			
Section I is designed to	be answered in 1 hor	ur and Section 2 in $1\frac{1}{2}$	hours.	
You are advised to divid	de your time accordin	ngly.		
In section II answer E	ITHER the a, b and c	c OR the d, e, and f of	each question	n Maria ang katalang sa tang sa t
For your guidance the a	approximate mark for	r each part of a question	on is indicated in brackets.	raturde (n) Proubp : e - 1 - 0
You are reminded of the	e necessity for good E	English and orderly pro	esentation in your answers	ipanamon 1 - 1 (11) E Jeanarg erl (1 (11)
In calculations you are	advised to show all th	he steps in your workin	ng, giving your answer at	each stage;
Where necessary, assum				napped a second of (a)
	of free fall, $g = 10 m s$			boau si pique di l
	in air, $c = 3 \times 10^8$ m			
- the charge on an	$electron, e = 1.0 \times 10$	0 0		
Calculators are allowed	Lidy the starting of	wound around a card	vitet. N-St hold near a côi	an red classed a study of the
And the second based on the second	http://	www.gcere	wision.com	

Figure 2

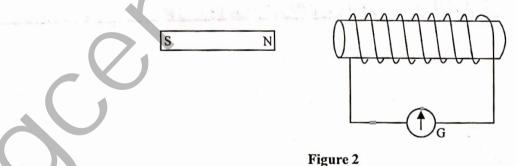
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Turn over



- (i) couple is used
 - (ii) moment is used.
- 3. Figure 2 shows a bar magnet, N-S, held near a coil wound around a cardboard tube, and which is connected to a galvanometer, G.

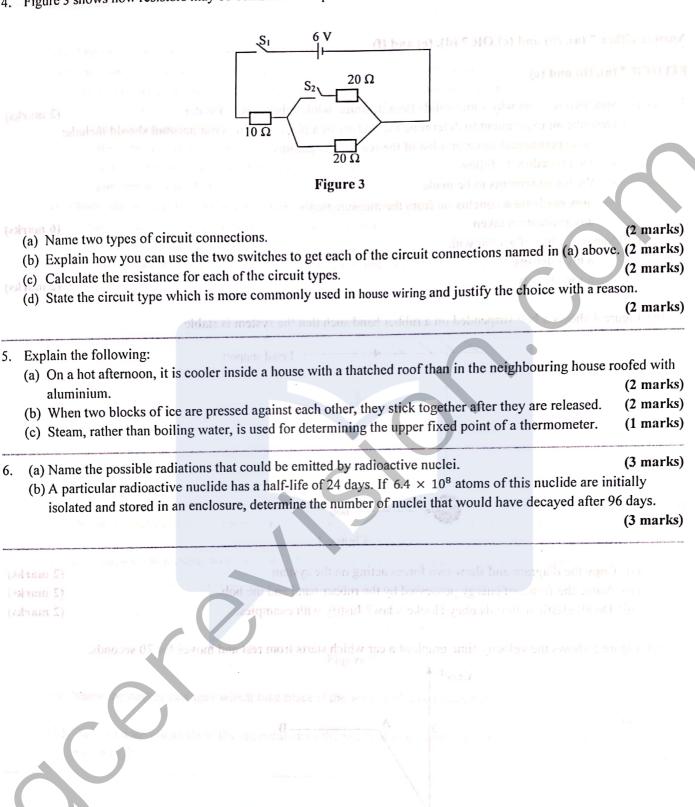
(2 marks)



(a) Copy the diagram and draw the magnetic flux pattern for the bar magnet.
(b) State what will be observed on the galvanometer if the magnet is moved rapidly towards the coil.
(c) Draw the magnetic flux pattern for the coil as the magnet approaches it.
(2 marks)
(2 marks)

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4. Figure 3 shows how resistors may be connected to a power source with two switches, S1 and S2.



Pietre 5

6.

2020/0580/2/A/Q

Section 2 (1 1/2 hours)

Answer ALL questions, choosing one question from each pair of alternatives

Answer either 7 (a), (b) and (c) OR 7 (d), (e) and (f)

EITHER 7 (a), (b) and (c)

7. (a) (i) State two reasons why some solids float in water, while others sink in water.

- (ii) Describe an experiment to determine the density of a piece of iron. Your account should include: (2 marks)
 - an experimental setup or a list of the required apparatus
 - the procedure to follow
 - the measurements to be made
 - how to obtain a conclusion from the measurements
 - any precaution taken
- (iii) Name one use of a solid with:
 - a high density
 - a low density.

(2 marks)

(6 marks)

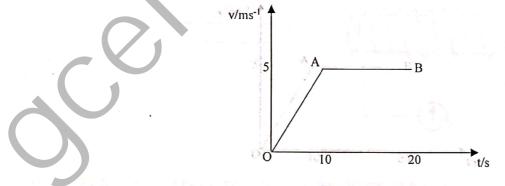
(b) Figure 4 shows a bob suspended on a rubber band such that the system is stable.

Fixed support Rubber band - bob Figure 4

- (i) Copy the diagram and show two forces acting on the system.
- (ii) Name the forms of energy possessed by the rubber band and the bob.
- (iii) Do all elastic materials obey Hooke's law? Justify with examples.

(2 marks) (2 marks) (2 marks)

(c) Figure 5 shows the velocity-time graph of a car which starts from rest and moves for 20 seconds.





- (i) Describe the motion of the car in section OA and section AB of the graph.
- (ii) Calculate the distance covered by the car from rest for the 20 seconds.

(2 marks) (2 marks) for more free gce questions, notes and free answers, visit http://www.gcerevision.com or download our app "kawlo" on playstore

OR 7 (d), (c) and (f)	Orburn (e) (b) 8 JIO (orbain (if baar(a) 8 redate to een (
	() trest (4) ((2 31 () ())
7. (d) (i) State two ways by which waves are classified	
 (d) (i) State two ways by which waves are classified (ii) Describe an experiment to show that light d needs a material medium for propagation. Y an experimental setup or a list of require - the procedure to follow 	oes not need a material medium for propagation, but that sound four description should include:
the measurements or observations made	(b) Destriction was intercepting the acceleration of a read-
- how to obtain a conclusion from the obs	
- any precaution taken.	
y 1	wave is used because it either needs a material medium to
(e) Figure 6 shows a convex lens, L, of focal length	, 5 cm with an object, O, placed perpendicularly to its principal
axis.	appy of a ministration of states in the second states of the second states and second states and second states
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(Arigin 1)	and the group development catalogue and the state of the match of the match of the match of the state of the
down our ito considered in the OC in	5 cm 10 cm
and important values on both axes 👘 👘 🔞	The state a very second of the state of the
	jigure 6 m second a second and the second and all
the object.	ght from the object to indicate how the lens forms an image of (3 marks)
(ii) Give any two characteristics of the image for	rmed. (2 marks)
(iii) Name a practical device in which a lens is us	sed to form an image of an object as in Figure 6. (1 mark)
(f) Figure 7 shows a thin metal wire, AB, which is t	ied at the points A and B such that it is stiff.
A 201 [201 [103] 28. [26] [103]	Thin metal wire
	Figure 7
hd-size nove it is barmeete in 6 the appress weat.(2 marks) =	AMIENDER DU STREETUNG DE
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(i) Name the energy changes which take place if the wire is plucked with the finger or a small piece of broom.
 (2 marks)
 (ii) Sketch a diagram to show the appearance of the plucked wire, and indicate the distance that represents one

wavelength.

(struct): (struct)

prime here the protection in (i) above is ensured.

-. V. If somethin is nated 2200 W. 240 V. A student brought a 5 A fuse to oscion the coffice reality (Attributed to involve information that flows in the coffee maker, and hence determine whether or not the 5 A 612 b. Single - 12 mer (make population).

2020/0580/2/A/Q

Turn Over

(2 marks)

FITUE		. ,	(-) (OR 8 (d),	(0) แกน	(1)					
LIIUE	CR 8 (a), (b)	and (c)									
8. (a)	Define										
	(i) Electros	static forc		d mode							(2 mar
	(ii) Friction	1.				di Use					(2 mar
(b)	A student w	vas invest	igating th	e acceler	ation of	n cmoll to			ant that		
(-)	A student w	as as show	wn in the	table belo	ation 01 ; ow.		by car do	wn a ru	n way using	g different fo	rces. The da
	EAL	0.0	2.0	4.0	6.0	8.0	12.0	16.0	18.0	20.0	
	a/m s ⁻²	0.0	1.6	3.4	5.2	7.0	10.6	14.2	16.0	18.0	
	(i) Define	accelerati	ion.								()
	(ii) Plot a g			object, O.	with an <i>a</i>			1.1.1	and the second	er - Orte ()	(2 mar
	(yapı or r	/ IN (y-ax)	(S) agains	ta/ms ⁻	2 (x-avis	3				15
	(ii) Determ	ine the sl	ope of the	is) agains e graph.	t a/m s⁻	⁻² (x-axis	5).		C		
	(ii) Determ (iv) What p A motorist this velocit	ine the sl bhysical q accelerate y for a fu	ope of the uantity do es uniforr rther 20 s	e graph. Des the slo mly from . He sees	ope repro	⁻² (x-axis ssent? attains a	;). velocity	of 30 m	s ⁻¹ in 20 s. vay, and ap	He then cont plies the bra	(2 mar (1 ma tinues with
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(f) An earth wire is considered as a safety precaution in house wiring.

- (i) What does it protect?
- (2 marks) (ii) Explain how the protection in (i) above is ensured.
- (iii) A coffee maker is rated 2200 W, 240 V. A student brought a 5 A fuse to use on the coffee maker. Calculate the maximum current that flows in the coffee maker, and hence determine whether or not the 5 A (3 marks) fuse is suitable for use in the appliance.

(1 mark)

Answer either 9 (a), (b) and (c) OR 9 (d), (e) and (f)

EITHER 9 (a), (b) and (c)

 9. (a) Define the following and state their S.I. units of measurement. (i) Heat. (2 marks) (ii) Temperature. (2 marks) (iii) State two features on a clinical thermometer that makes it different from a normal liquid – in –glass thermometer. (2 marks) (b) (i) Distinguish between heat capacity and specific heat capacity. (2 marks) (ii) 500 g of water were heated using an electric heater rated 1000 W for 2 minutes. If the specific heat capacity of water is 4200 J kg⁻¹ K⁻¹. Calculate the temperature change (4 marks) (iii) State one use of water due to its high specific heat capacity. (1 marks) (c) (i) Define thermal expansion. (i) Explain how a bimetallic strip works in an electric iron to switch it on and off. (3 marks) (ii) Explain how a bimetallic strip works in an electric iron to switch it to touch. (2 marks) (ii) Radioactivity. (iii) Radioactivity. (iii) State two differences between n-type and p-type semiconductors. (c) (i) Distinguish between fusion and fission. (c) (
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 (b) (i) Distinguish between heat capacity and specific heat capacity? (ii) 500 g of water were heated using an electric heater rated 1000 W for 2 minutes. If the specific heat capacity of water is 4200 J kg⁻¹ K⁻¹. Calculate the temperature change (4 marks) (iii) State one use of water due to its high specific heat capacity. (c) (i) Define thermal expansion. (2 marks) (iii) Explain how a bimetallic strip works in an electric iron to switch it on and off. (3 marks) (iii) Explain why a metal spoon, left beside a flame for a few minutes becomes so hot to touch. (2 marks) OR 9 (d), (e) and (f) 9. (d) Define the following: (i) Radioactivity. (iii) Half -life. (iii) State two differences between n-type and p-type semiconductors. (c) (i) Distinguish between fusion and fission. (2 marks) 					
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OR 9 (d), (e) and (f) 9. (d) Define the following: (i) Radioactivity. (ii) Half -life. (2 marks) 			(iii) Explain now a billetane surp works in an electric net to be	utes becomes so hot to touch.	(2 marks)
9. (d) Define the following: (2 marks) (i) Radioactivity. (2 marks) (ii) Half -life. (2 marks) (iii) State two differences between n-type and p-type semiconductors. (2 marks) (e) (i) Distinguish between fusion and fission. (2 marks)			(III) Explain why a nicial spoon, left beside a name for a few man		
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(iii) State two unreferences between in type and p type connection (2 marks) (e) (i) Distinguish between fusion and fission. (2 marks)			(ii) Half -life.		•
(e) (f) Distinguish between fusion and fission.			(iii) State two differences between n-type and p-type semiconduct	ors.	(2 marks)
(e) (f) Distinguish between fusion and fission.					
In a radioactive fission reaction, a nuclide $^{238}_{92}X$ undergoes two α -decays and two β -decays to form a daughter		(e)	e) (i) Distinguish between fusion and fission.		
			In a radioactive fission reaction, a nuclide $^{238}_{92}X$ undergoes two α - α	decays and two β -decays to form a β	daughter
nuclide					
(ii) Write a balanced equation for this reaction. (4 marks)			(ii) Write a balanced equation for this reaction.		(4 marks)
(iii) State one use of a named radioisotope. (1 mark)	•				(1 mark)
(f) (i) Define background radiation. (2 marks)		(f)	(i) Define background radiation.		
(ii) State and explain the nature of tracks produced by alpha particles in a cloud chamber. (3 marks)			(ii) State and explain the nature of tracks produced by alpha partic	eles in a cloud chamber.	
(iii) State two safety precautions to take in handling radioactive materials. (2 marks)			(iii) State two safety precautions to take in handling radioactive m	aterials.	(2 marks)