

PHYSICS FORM TWO NECTA 2011

Solutions from: Maktaba by TETEA

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i	ii	iii	iv	v	vi	vii	viii	ix	x
D	C	B	A	D	C	A	C	A	C

xi	xii	xiii	xiv	xv	xvi	xvii	xviii	xix	xx
D	B	B	A	B	B	B	B	B	B

2

i	ii	iii	iv	v	vi	vii	viii
A	C	M	K	E	L	I	G

3.(a)Neutral point

(b) $n = 360^\circ/\Phi$

(c)(i)Tidal energy

(ii)Energy obtained from the earths crust.

4.(a)Electrostatic is the study of static electricity.

(b)

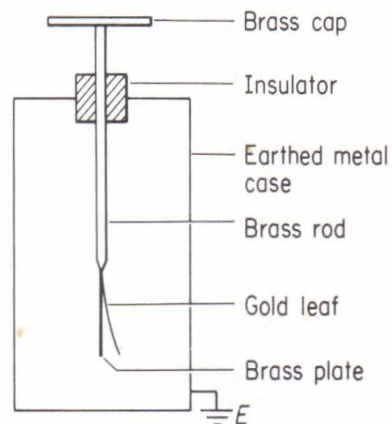


Fig. 32.1. Gold-leaf electroscope

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5.(a) Simple machine is any object which uses power from a person to simplify work.

(b)(i) tangent of the angle of inclination

(ii) number of pulleys

(c)(i) liquid is incompressible

(ii) has high boiling point than air

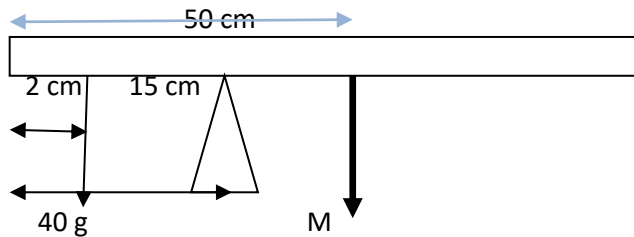
6.(a) Ohm's law states that, "at constant temperature, the p.d of the circuit is proportional to the current"

(b) Current = V/R

$$= 8/3 = 2.7 \text{ A}$$

7. (a) Centre of gravity is point at which the whole weight of the body is concentrated.

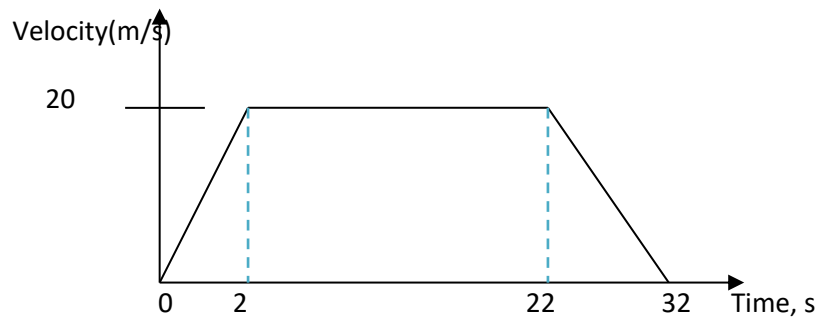
(b)(i)



$$\text{Then, } 40 \times 15 = m \times 33$$

$$\text{Mass} = 18.2 \text{ g}$$

8. (a)



(b)(i) Acceleration = $(20 - 0)/2$

$$= 10 \text{ ms}^{-2}$$

(ii) Deceleration = $(0 - 20)/10$

$$= 2 \text{ m/s}^2$$

(c) Total distance covered = $\frac{1}{2} \times 20 \times 2 + 20 \times 20 + \frac{1}{2} \times 20 \times 10$

$$= 520 \text{ m}$$

9. (a) Energy is the ability to do a work

(b) Principle of energy conservation states that "energy cannot be created or destroyed but can be transferred from one form to another"

(c) Work = force \times distance

$$= 200 \times 10$$

$$= 2000 \text{ J}$$

10. (a) Archimedes principle states that, "When the body is partially or totally immersed in fluid it experiences an upthrust which is equal to the total weight of the body"

(b)(i) Apparent weight = $10 - 8$

= 2 N, convert in mass

$$= 2/10 = 0.2 \text{ kg} = 200 \text{ g}$$

Volume = mass/density

$$= 200/0.8$$

Volume of liquid displaced is 250 cm^3

(ii) density = mass/volume

$$= 100/250$$

$$= 0.4 \text{ g/cm}^3$$