PHYSICS FORM TWO NECTA 2000

Solutions from: Maktaba by TETEA

by Yohana Lozaro

1	2	3	4	5	6	7	8	9	10
D	A	A	D	C	A	D	D	D	B

11	12	13	14	15	16	17	18	19	20
C	D	C	B	B	C	A	D	D	D

21.

i	ii	iii	iv	v
d	c	e	h	f

22.(i) 0.1 cm

   (ii) adhesive, cohesive

   (iii) Image distance (v)/object distance (u) from the mirror

   (iv) Lubricants

23. (i)Resist current

   (ii)A motor

  (iii) 300 J

 (iv) (a)Don't make noise in the laboratory

      (b) Don't enter in the laboratory without permission

24. (i) 339K, that is absolute temperature = 65 + 273 = 338K

   (ii) Static electricity

   (iii)Demagnetization process

  (iv)Newton's first law of motion
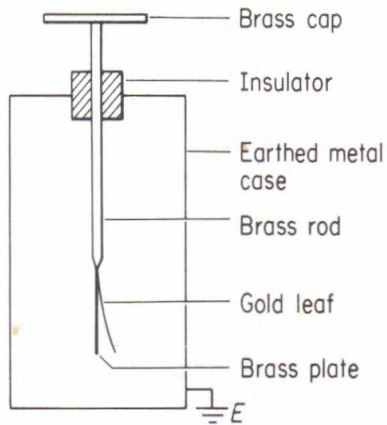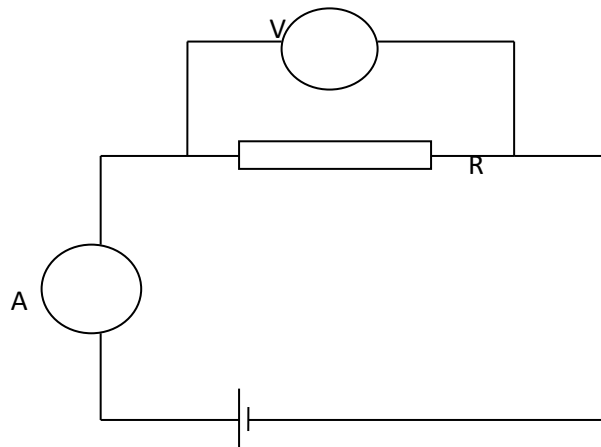
Fig. 32.1. Gold-leaf electroscope

25

26. (a)(i)

(ii)From resistance = voltage/current

3/0.75

The resistance = 4A

(b)The ammeter is not connected to the circuit to measure current.

27. (a)(i)Heat is the form of energy which transfers from one point to another due to their temperature difference between those two point, while latent heat is amount of heat required to change the state of a substance.

(ii)

-latent heat of fusion = mass x specific heat of fusion

= 0.8 kg x 334400 j/kg

= 267520 J

(b)Let weight be F

Apply Pascal's law, pressure at large piston = pressure at smaller piston

-pressure at smaller piston, $P_1 = 100N/20cm^2$

$= 5 N/cm^2$

-pressure at larger piston, $p_2 = F/500 cm^2$
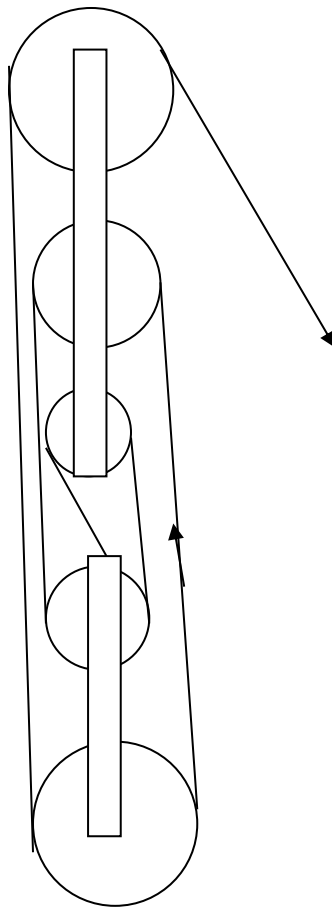
Since $p_1 = p_2$

$5 = F/500$

$F = 2500 N$

Weight supported = 2500 N.

28. (i)

(ii) Ma = load/effort

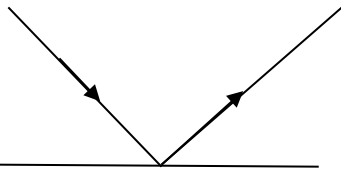= 100/25 = 4

Velocity ratio, VR = 5

Then, efficiency = 4/5 x 100%
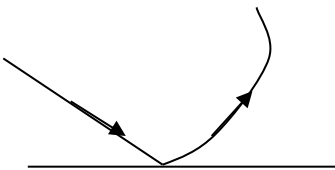
Efficiency of the system 80%

29.(a)

Regular   diffuse

(b)(i)Principle of conservation of linear momentum states that, for two colliding bodies, the sum of linear momentum before collision equals to sum of linear momentum after collision"

(ii) Let velocity be v

From above principle,

(100 x 100) = (5000 x v)

Velocity of recoil of the cannon is 2 m/s