PHYSICS FORM TWO NECTA 2017.

Solutions from: Maktaba by TETEA

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1.

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

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

2.

i	ii	iii	iv	v
C	A	E	A	F

3.(i)Fundamental physical quantities

(ii)simple machines

(iii)Inertia

(iv)Non luminous objects

(v)Non elastic materials

4.(a)(i)Work is the product of force and its distance moved.

(ii)Energy is the capacity of doing work.

(iii)Power is the rate of doing work.

(b)Force = mass x g

=200 x 10 = 2000N

Work done = force x distance

= 2000N x 6m = 12000 J

Power = workdone /time

= 12000 J/10s

Power = 1200 W

(c)Kilowatt is the SI unit of power in 10^3. i.e 1Kw = 10^3W

-Kilojoule is the SI unit of workdone in 10^3. i.e 1kW = 10^3W

5.(a)(i)Acceleration is the rate of changing velocity.

(ii) velocity,= 60 km/h

But 10 m/s = 36 km/h, so 60 k/m = 16.7 m/s

Acceleration = (0 – 16.7)10

Aceleration is – 1.7m/s^2

(b)(i)Distance is the path covered, but displacement is the distance covered in a specific direction

(ii)A body at rest or at constant velocity

(c) Force = mass x acceleration

3N = m x 7

Mass = 0.43 kg

6.(a)Pascal's law states that"If pressure is applied in an enclosed fluid, it is distributed equally throughout the liquid"

(b)(i)depth

(ii)density

(iii)gravity, g

(c)pressure = force/area

0.2 = 2/A

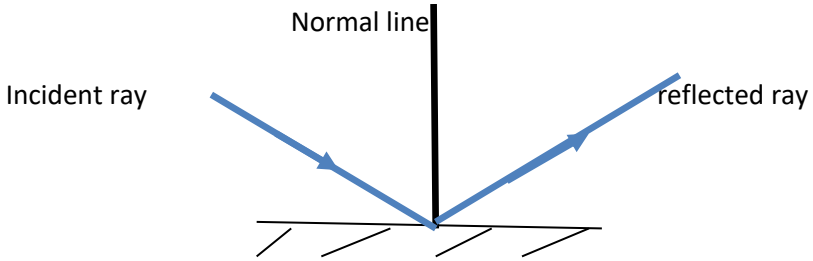
Area is 10 m^2

7. (a) Light is the form of energy that transfers in form of rays.

(b)Laws of reflection states that

-incident ray and reflected ray and normal lie on the same plane on the mirror.

-the angle of incidence equals to angle of reflection.



(c)(i)

From number of image, $n = 360^0/\theta - 1$

$n = 360/60 - 1$

$= 5$ images.

(ii)When placed parallel, angle is 0 then

$n = 360/0 - 1$

= infinity number of images

8. (a) Principle of moments states that "sum of clockwise moments equals to sum of anticlockwise moments"

(b)Stable equilibrium is the type of equilibrium whereby the body does not gain new position when displaced, while unstable equilibrium is the type by which the body gain new position on displacement but regain its original position.

(c)Let mass of rule be m

Using principle of moments,

$(0.2 \times 10) = (m \times 40)$

Mass of metre rule is 0.05 N convert into kg

9. (a)(i)used to measure pressure of gases

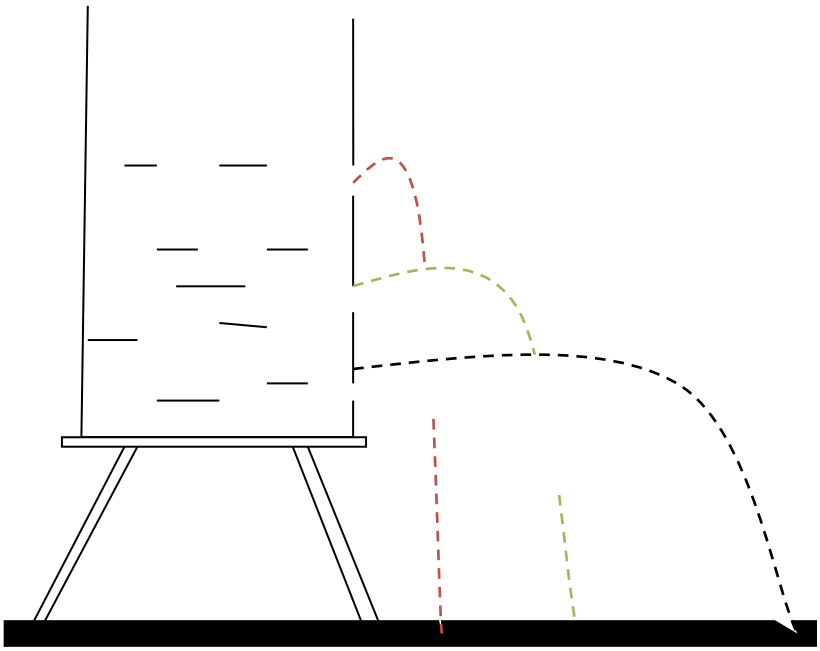
(ii) used to measure pressure of liquids

(iii)used to measure pressure of liquids

(iv)Used to measure the atmospheric pressure.

(b)Elephant make the area of contact with the mad soil be large, hence pressure is reduced that why does not sink.

(c)Dependence of liquid pressure.



10. (a)(i) used in producing light

(ii) Used to driver electric motors

(b)Because the parallel connection is not affected when one bulb is burn and hence current is continued to be supplied. As compare to series connection

(c)Diagram of electric circuit.