PHYSICS FORM TWO NECTA 2008.

Solutions from: Maktaba by TETEA

by Yohana Lozaro

1.

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

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

2.

i	ii	iii	iv	v	vi	vii	viii
G	E	C	H	A	B	I	D

3.(a)Velocity

(b)acceleration and deceleration

(c)(i)angle of incidence equals to angle of reflection

(ii)the incident ray, reflected ray and normal all lie on the same plane.

4. (a)(i)stable

(ii)unstable

(iii)neutral

(b)pair of scissors

(c)pulley

5(a)Heat capacity is the amount of heat required to raise temperature of substance by 1K

(b)POTENTIAL energy, PE = 10 x 4 x10

= 400 J

(c)Rd = 8000/1000

= 8

6. (a)(i)a cell

(ii)resistor

(iii)battery

(iv)lamp

(v)switch

(vi)variable resistor

(b)(i)B, North poles

(ii)x is neutral point

7.recall that

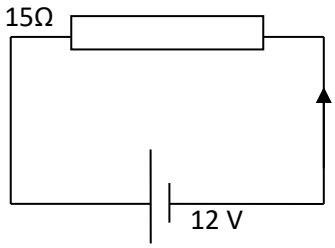
$V^2 = u^2 + 2as$

$0^2 = 20^2 + 2 \times 10 \times s$

Maximum height is 40 m

8. (a)Ohms law states that "at constant temperature, the p.d of circuit equals to current"

(b)(i)



(ii)Current = 12/15

= 0.8 A

9. (a)pressure = force/area

= 2 /10

Pressure = 0.2 N/m^2

(b) Quantity of heat = mass x sp. Heat capacity x temp. change

320 = 40 x C x (50 – 30)

C= 0.4 j/g K

10.

Load = 500N

Load distance = 5m

Effort distance = 25 cm

Efficiency = 0.8

-From efficiency = $\frac{Mechanical\ advantage}{velocity\ ratio}$

Also,VR = effort distance/load distance

= 25/5 = 5

Then, 0.8 = MA/5

MA = 4

Again, MA =load/effort

Effort = load/MA

= 500/4

Effort = 125 N

Also workdone by load = 500 x 5 = 2500 J

Workdone by effort = 125 x 25 = 3125 J

Total workdone by machine = 2500 + 3125

= 5625 J