

PHYSICS FORM TWO NECTA 2008.

Solutions from: dadisi.co.tz  TEA

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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, $PE = 10 \times 4 \times 10$

$$= 400 \text{ J}$$

(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

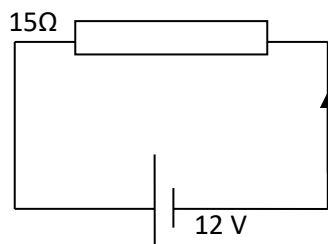
$$v^2 = u^2 + 2as$$

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

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 = $12/15$

$$= 0.8 \text{ A}$$

9. (a)pressure = force/area

$$= 2 / 10$$

$$\text{Pressure} = 0.2 \text{ N/m}^2$$

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

$$320 = 40 \times C \times (50 - 30)$$

$$C = 0.4 \text{ J/g K}$$

10.

$$\text{Load} = 500\text{N}$$

$$\text{Load distance} = 5\text{m}$$

$$\text{Effort distance} = 25 \text{ cm}$$

$$\text{Efficiency} = 0.8$$

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

$$\text{Also, VR} = \text{effort distance/load distance}$$

$$= 25/5 = 5$$

$$\text{Then, } 0.8 = \text{MA}/5$$

$$\text{MA} = 4$$

$$\text{Again, MA} = \text{load/effort}$$

$$\text{Effort} = \text{load/MA}$$

$$= 500/4$$

$$\text{Effort} = 125 \text{ N}$$

$$\text{Also workdone by load} = 500 \times 5 = 2500 \text{ J}$$

$$\text{Workdone by effort} = 125 \times 25 = 3125 \text{ J}$$

$$\text{Total workdone by machine} = 2500 + 3125$$

$$= 5625 \text{ J}$$