PHYSICS FORM FOUR NECTA 2009

Solutions from: Maktaba by TETEA

by Yohana Lozaro

1

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

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

2.

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

3. Boiling does not change the substance to vapour, while evaporation changes the liquid into gas

4.(i)Sum of upward forces must be equal to upward forces.

(ii)the sum of clockwise moments must be equal to anticlockwise moments.

5.(a)(i)stroking method

(ii)electromagnetic method

(iii) placing the magnetic material on the magnetic

(b)Both they are used to measure diameters of smaller objects

6. (a)Heat is the form of energy that transfers from one point to another due to temperature changes between them, Temperature is the measure of degree of hotness or coldness of the body.

(b)Due to frictional forces, whereby some energy is used to overcome it.

©Pressure= force/ area

= 2/10 = 0.2 N/m^2

7.(a)Acceleration is the rate of change of velocity, while Deceleration is the negative acceleration

(b)Acceleration = 480/50 = 9.6 m/s^2

Deceleration = 480/100

= 4.8 m/s^2

8.(a)Recall that, coefficient of friction = friction force/normal reaction

So, $\mu = 1.96/(1 \times 10)$

Coefficient of friction is 0.196

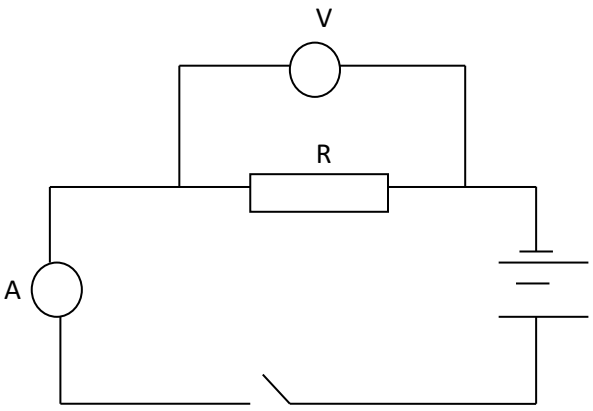
(b)Required that,

$Q = mC\Delta T$

$38000 = 2 \times C \times (90 - 40)$

Hence, specific heat capacity = 380J/kg K

9. (a)



(b)From V =IR

= 2 x 20

Voltage required is 40 V.

10.(a)(i)Kinetic energy

(ii)Potential energy

(b)(i)PE = mgh

= 10 x 10 x 4 = 400 J

(ii)Potential energy.