PHYSICS FORM TWO NECTA 2005.

Solutions from: Maktaba by TETEA

by Yohana Lozaro

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

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

2.

i	ii	iii	iv	v	vi	vii	viii
D	O	E	I	K	J	B	N

3. (a)Efficiency is the ratio between the mechanical advantages and velocity ratio if the machine.

(b)angle of dip

(c)(i)formation of water waves

(ii)formation of rain drops

4. (a)(i)Anomalous expansion of water is the behaviour of water to expand when cooled to a temperature of 40^0C

(ii)Fundamental law of electrostatics

(b)Latent heat of fusion is the amount of heat required to change a substance from solid to liquid, while latent heat of vaporization is the amount of heat required to change a substance from liquid to vapour.

5.(a)(I)-nickel

(ii)cobalt

(b)(i)ebonite

(ii)silica

6.(a)(i)solid

(ii)liquid

(iii)gas

(b)(i)Energy = ½ x 150 x 2^2

Energy = 300 J

(ii)Kinetic energy.

7(a)Temperature is the measure of degree of hotness or coldness of the body.

(b)Molecules of the solid body starts to move making the body to expand.

(c)Quantity of heat = mass x specific heat capacity x temp. change

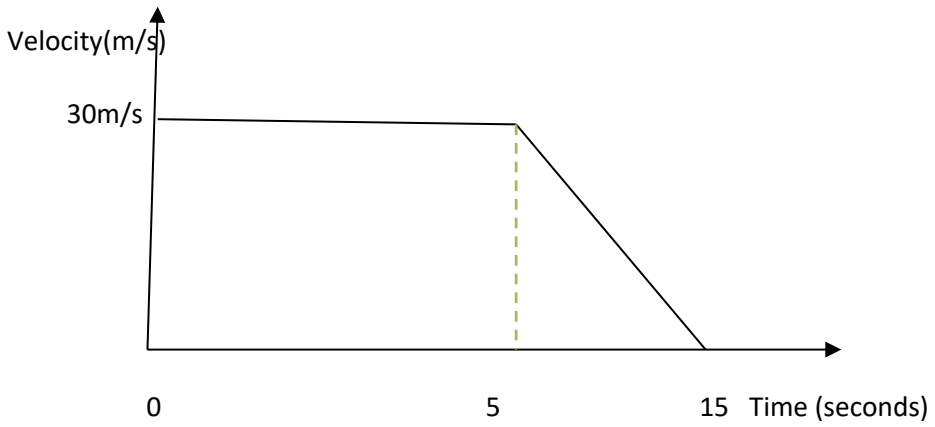
Q = 0.03 x 840 x (120 – 100)

= 504 J

8.(a) specific Heat capacity is the amount of heat required to raise the temperature of a unit mass o a substance by 1K

(b)Newtons first law of motion states that “every body will continue to remain in its state of rest or uniform motion unless external force is applied on it”

(c)(i)



(ii)Total distance = area of the graph

= 30 x 5 + ½ x 10 x 30

Total distance travelled is 300 m

9. (a)Ohms law states that “at constant temperature, the potential difference across the conductor is directly proportional to to the current”

(b) R= V/I

= 3/0.75

R = 4Ω

(c)Total resistors in parallel = (6 x 4)/(6 + 4) = 2.4Ω

Then, current I = V/R

= 12 /4

= 3 A

10.(a)(i)VR = (1/0.2)/(50) = 10

(ii)MA = VR/ efficiency

= 10/0.3

= 33.3

(iii)Effort = load/MA

= 12000/33.3

= 36 N

(b)Neutral point is formed when the same poles of magnet are placed together as a result the magnetic fields cancel each other hence form the region where there is no magnetic field, that is a neutral point.