

PHYSICS FORM TWO NECTA 2010.

Solutions from: Maktaba by TETEA

by Yohana Lozaro

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| | | | | | | | | | |
|---|----|-----|----|---|--------|-----|------|----|---|
| i | ii | iii | iv | v | vi | vii | viii | ix | x |
| B | B | A | B | C | 3150 J | C | A | C | B |

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

2.

| | | | | | | | |
|---|----|-----|----|---|----|-----|-----------|
| i | ii | iii | iv | v | vi | vii | viii |
| B | E | A | L | H | F | I | NO ANSWER |

3. (a)temperature

(b)(i)Floating objects on fluids

(ii)hydrometer

(c)staight line

4.(a)mass of liquid = 75 – 50 =25g

Density = mass/ volume

$$= 25 / 20$$

Density of liquid is 1.25 g/cm³

(b)Relative density = 1.25/1 = 1.25

5.(a)Power is the rate of doing a work.

(b) power = workdone/time taken

$$= (75 \times 10 \times 12 \times 0.2)5$$

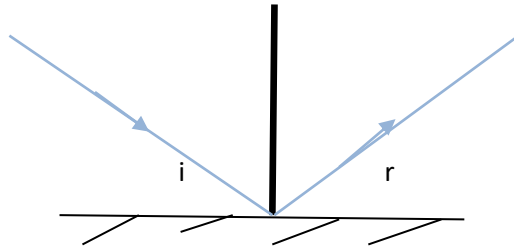
$$\text{Power} = 360 \text{ W}$$

6. (a) Laws of reflection

- angle of incidence equals to angle of reflection

- the incidence ray, reflected ray and normal all lie on the same plane on the mirror

(b)



(c) Angle of incidence is equal to angle of reflection

7.(a)(i) Acceleration = velocity change/time

$$= (25/6 - 0)/10$$

Acceleration is 0.417 m/s^2

(ii) distance, $s = ut + \frac{1}{2} at^2$

$$= 0 \times 10 + \frac{1}{2} \times 0.417 \times 10^2$$

Distance covered = 20.8 m

(b) $a = -1.8 \text{ m/s}^2$, $v = 0 \text{ m/s}$, $u = 25/6 \text{ m/s}$ given, time = t

From, $v = u + at$

$$0 = 25/6 - 1.8t$$

Time used = 2.3 seconds

8.(a) in series, emf, $1/E = 1/1.5 + 1/1.5$

$$\text{Emf} = 0.75 \text{ V}$$

$$R = 2 + 2 = 4\Omega$$

Current = $0.75/4 = 0.188 \text{ A}$

(b) in parallel

$$E = 1.5 + 1.5 = 3V$$

$$1/r = \frac{1}{2} + \frac{1}{2}, r = 1\Omega$$

$$\text{Current} = 3/1 = 3A$$

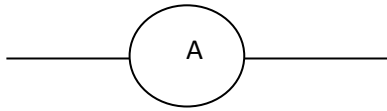
9.(a) Atmospheric pressure is the pressure of the surrounding atmosphere.

(b) From, $P = \text{density} \times g \times \text{mmHg}$

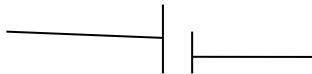
$$= 13600 \text{ Kg/m}^3 \times 10 \times 0.65$$

$$= 86659.56 \text{ N/m}^2$$

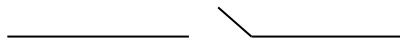
10. (a)(i)



(ii)



(iii)



(iv)

