

Name of the Student: _____

Max. Marks : 20 Marks

Time : 20 Minutes

Mark Schemes

Q1.

(a) C

1

(b) reflection at the mirror of ray from shoe to person's eye
may be drawn freehand

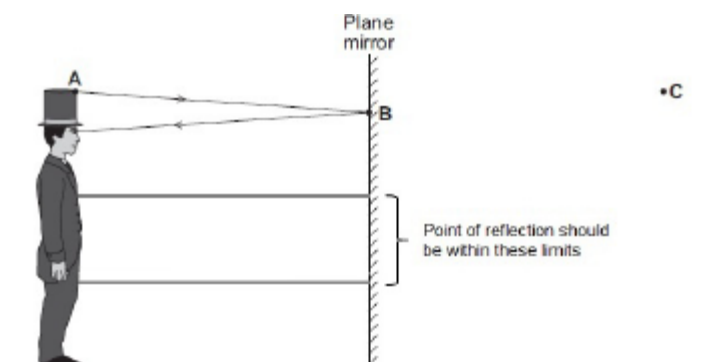
1

angle of incidence = angle of reflection
judged by eye
a ruler must have been used

1

arrow to show correct direction on either incident or reflected ray
only one arrow needed but if more drawn must be no contradiction
both incident and reflected ray must be shown

1



(c) virtual

1

[5]

Q2.

(a) vibrate / oscillate

accept a correct description
move is insufficient

1

(b) 336

allow 1 mark for correct substitution, ie $420 \times 0.8(0)$ provided no subsequent step shown

2

Q3.

- (a) (i) wavelength
accept frequency
accept speed 1
- (ii) amplitude
accept energy
height is insufficient 1
- (iii) sound 1
- (b) 0.12
allow 1 mark for correct substitution, ie 8×0.015 provided no subsequent step shown 2
- metre per second **or** m/s **or** metre/second
*do **not** accept mps*
units must be consistent with numerical answers 1

[6]

Q4.

- (a) to reflect (the infrared)
accept (shiny surfaces) are good reflectors
ignore reference to incorrect type of wave 1
- (b) black 1
- best absorber (of infrared)
answer should be comparative
black absorbs (infrared) is insufficient
accept good absorber (of infrared)
ignore reference to emitter
ignore attracts heat
ignore reference to conduction 1
- (c) to reduce energy loss
accept to stop energy loss
accept heat for energy
accept to stop / reduce convection
- or**
 so temperature of water increases faster
accept to heat water faster
accept cooks food faster
- or**

reduces loss of water (by evaporation)

1

(d) 672 000

allow 1 mark for correct substitution, ie $2 \times 4200 \times 80$ provided no subsequent step shown

2

[6]