

## RECTILINEAR PROPAGATION OF LIGHT

1. Rectilinear property /light travels in a straight line;

(1mk)

2. (a) (i) B 1

(ii) any **one** from

1

- light travels in straight lines

- light will not pass through the cardboard

*accept 'the cardboard blocks the light'  
or 'the cardboard is opaque'*

- they are in the shadow of the cardboard

*do not accept 'they are in the shadow'*

(b) green

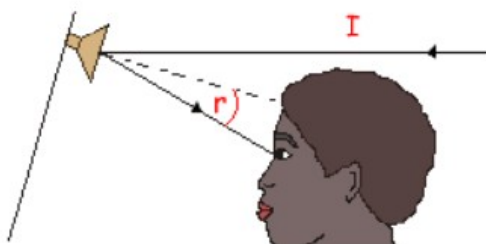
1

(c) Q

1

[4]

3. Ans



(i) See diagram ✓✓

(2 marks)

(ii) The normal ✓

(1 mark)

4. ANS

(a)	Lines	(i)	Middle dot labelled Z	1
		(ii)	From Y continuing on left of mirror as if coming from their Z	2
		Straight line from their Z to Y only scores (1)		
(b)	Incidence Reflection	(i)	Show correct $i$ and correct normal	1
		(ii)	Show their correct $r$	1
(c)	Image	Virtual		1

(Total 6 marks)

5. (a) • 65 1 (L5)

it is different from the angle of incidence or all the others are the same

accept 'number 4' or 'the fourth'

accept 'it is not  $60^\circ$ ' or 'it should be  $60^\circ$ '

accept 'the angle of reflection and the angle of incidence should be the same'

accept 'it is  $5^\circ$  out'

accept 'they are not the same'

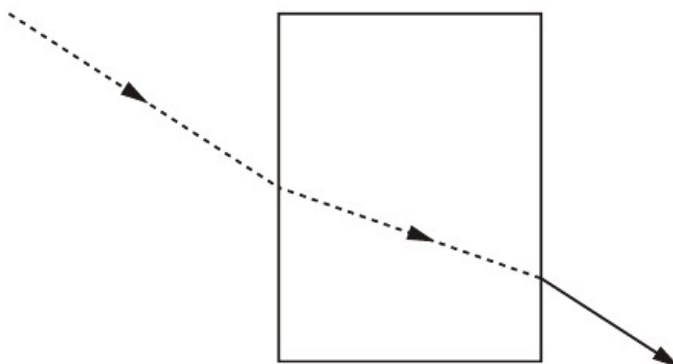
both the answer and the correct explanation are required for the mark  
award a mark for ' $60^\circ$ ' if the explanation is correct

'they go up in tens' is insufficient

'it does not fit the pattern' is insufficient

- (b) (i) • a number from 30 to 32 1 (L5)  
(ii) • greater than 1 (L5)  
accept 'greater' or 'bigger'

(c) 1 (L6)



accept a continuous straight line that  
bends away from the normal  
accept a line without an arrow  
The ray need not be parallel to the  
incident ray

[4]

6. (a) ray drawn from tooth to mirror to eye

1

angle I = angle R

*judged by eye*

1

at least one arrow in correct direction

*do not credit conflicting arrows*

1

*if no ruler used maximum mark is 2*

(b) virtual

1

upright

1

[5]

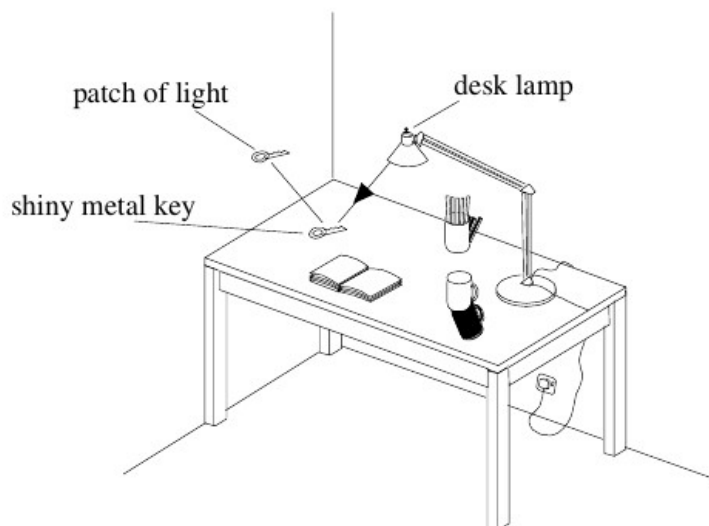
7. (a) (i) the first mark is for a continuous straight line from the rim of the lamp to the key  
the line must reach the key

1

the second mark is for the arrow on the line  
the arrow must point away from the lamp

(ii) the mark is for a straight line from the key to the patch of light  
the line must both touch the key and reach the patch of light

1



*do not accept broken lines  
accept the reflected ray drawn from any  
part of the key irrespective of the first  
ray  
the reflected ray need not have an  
arrow*

(b) any **one** from

1

- light cannot bend around the mug *accept 'light travels in straight lines'*
- light cannot go through the mug *accept 'the mug absorbs or scatters the light'  
or 'the mug is opaque' or 'the mug is  
in the way of the light'  
do not accept 'light reflects off the  
mug'*

[4]