

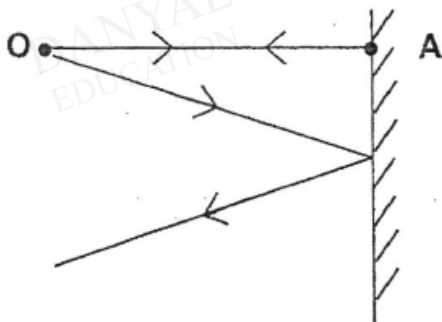
O Level Combined Physics MCQs

Light Test 2.0

Q1

The diagram shows two divergent rays of light from an object **O** being reflected from a plane mirror.

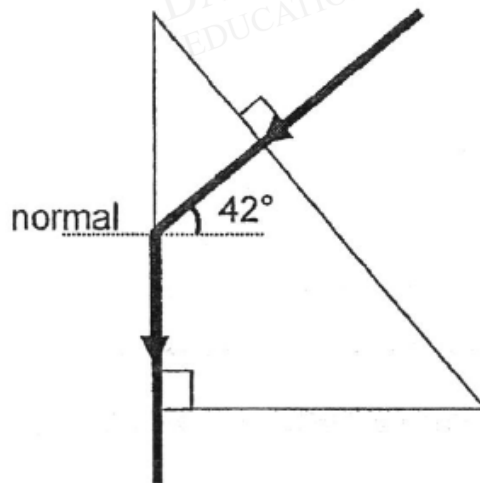
At which position will the image be formed?



- B
- C
- D

Q2

The diagram shows how a light ray enters and leaves a triangular glass prism.

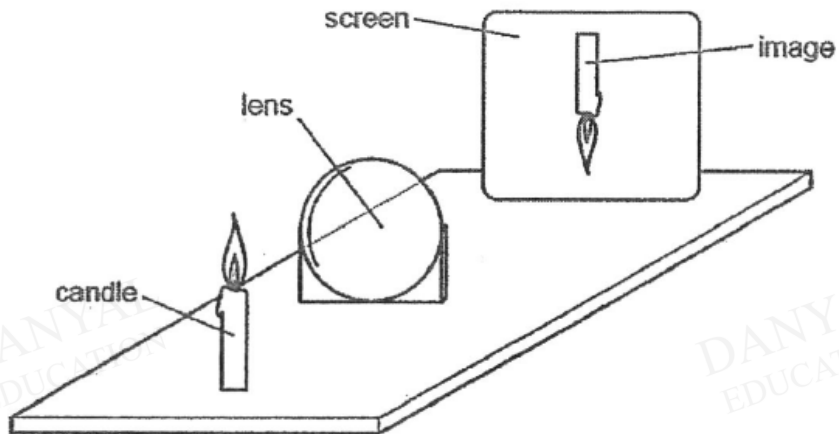


What is the refractive index of the glass?

- | | |
|--------|--------|
| A 0.67 | C 1.35 |
| B 1.00 | D 1.49 |

Q3

A thin converging lens is used to produce, on a screen, a focused image of a candle.



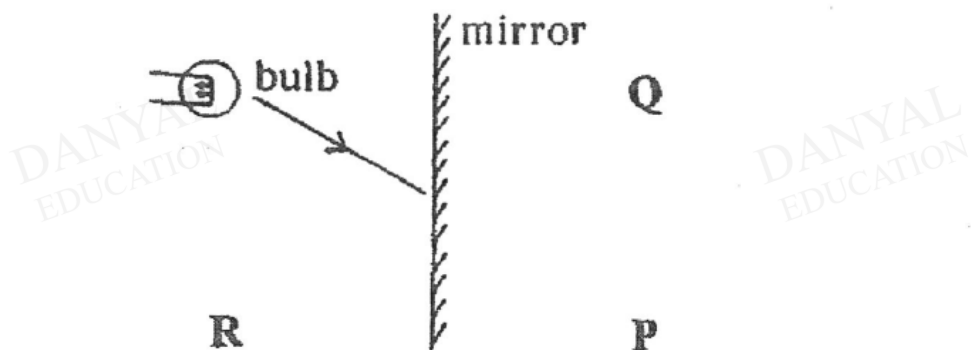
Various focused images are produced on the screen by moving the lens and the screen backwards and forwards. The lower half of the lens is covered with a cardboard.

Which of the following statements about the images formed on the screen is correct?

- A The height of the images will be halved.
- B There will be no images formed.
- C The images will be dimmer.
- D The images will become virtual.

Q4

A ray of light from a small light bulb strikes a plane mirror as shown in the diagram below.



Where is the image of the bulb formed?

- A At Q and virtual
- B At P and virtual
- C At R and real
- D At P and real

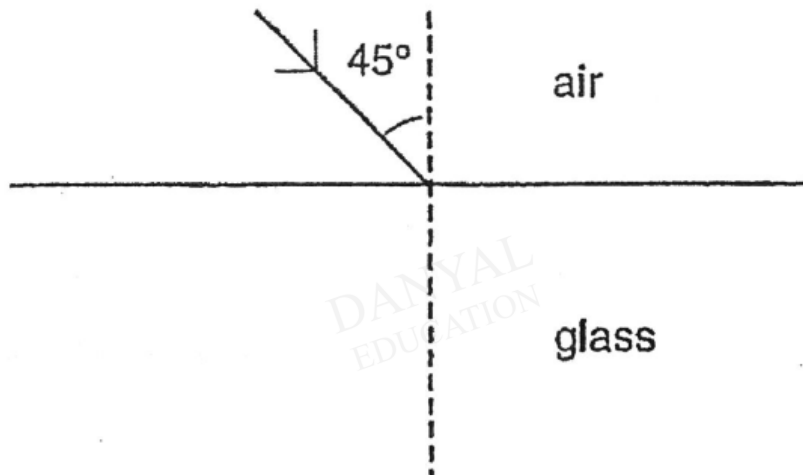
Q5

What affects the refractive index of a sample of glass?

- A The angle of incidence.
- B The shape of the glass.
- C The thickness of the glass.
- D The type of the glass.

Q6

The diagram shows a ray of light entering a glass block of refractive index 1.41 at an angle of incidence of 45° .

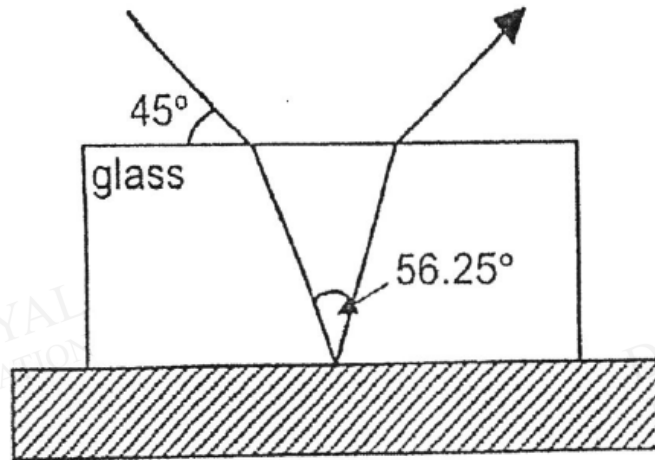


By how many degrees does the light ray change direction when entering the glass?

- A 15
- B 30
- C 45
- D 90

Q7

A piece of glass was placed on top of a polished mirrored surface as shown in the diagram below.

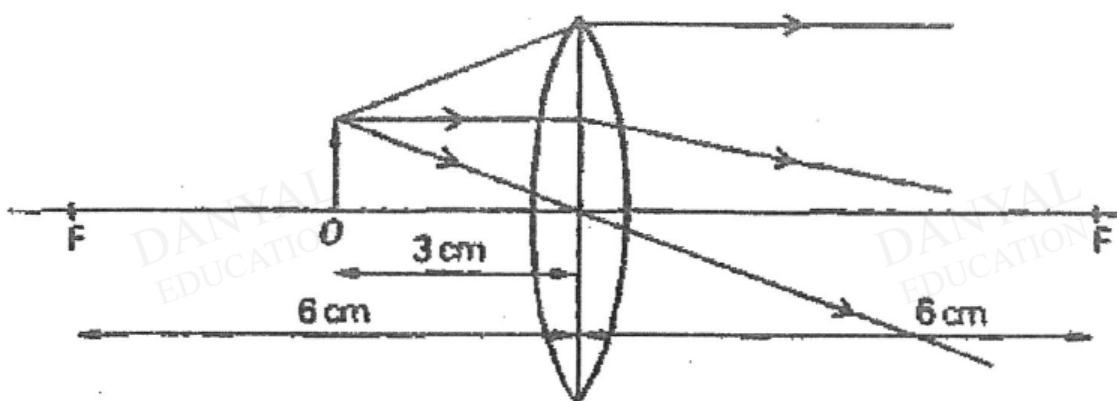


What is the critical angle of glass?

- A 28.13°
- B 41.81°
- C 45°
- D 56.25°

Q8

An object O is placed 3 cm away from converging lens of focal length 6 cm. (see diagram below.)



What type of image is produced?

- A Virtual, erect and magnified
- B Virtual, erect and diminished
- C Real, inverted and magnified
- D Real, inverted and diminished

Q9

Sophia stands in front of a plane mirror.

There are four objects, I, II, III and IV, placed around her as shown in Fig. 14.1.

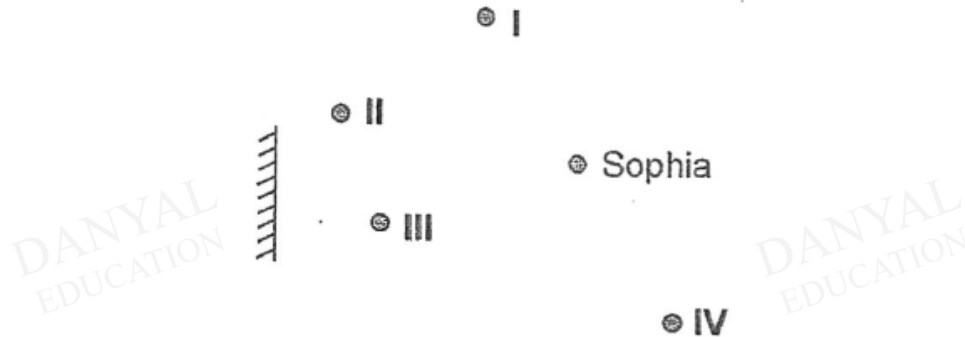


Fig. 14.1

Which object(s) can Sophia see in the plane mirror?

- A All 4 objects B I and II C III and IV D None

Q10

Fig. 15.1 shows a point light source P placed in front of a thin converging lens L.

It forms an image at point Q.

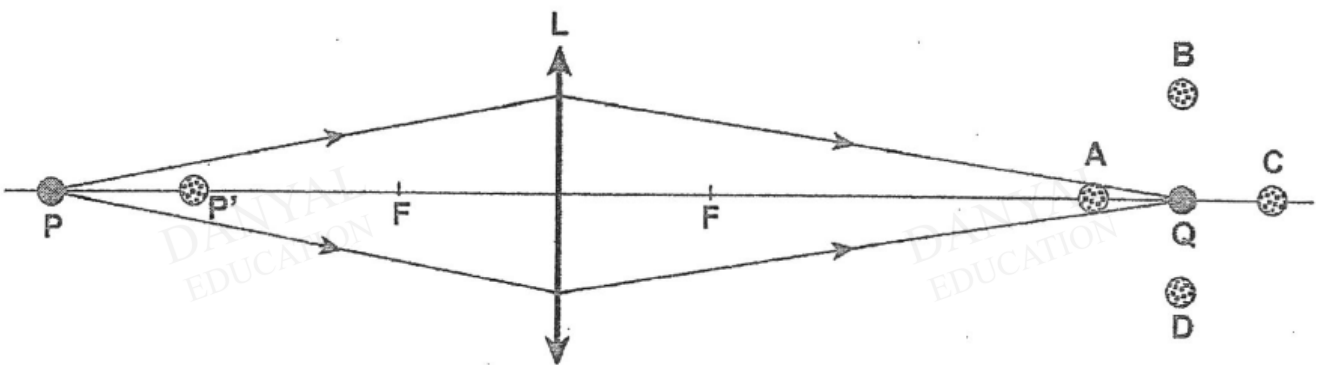


Fig. 15.1

If the light source P is moved to P', at which point, A, B, C, or D, will the image be likely to form?

Answers

Light Test 2.0

- Q1 B
- Q2 D
- Q3 C
- Q4 A
- Q5 D
- Q6 A
- Q7 B
- Q8 A
- Q9 C
- Q10 C

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