Foundation

Udaan 2025

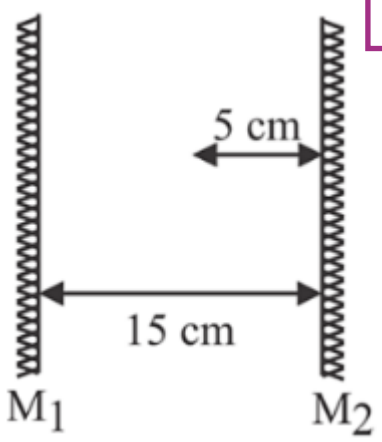
Physics

Light - Reflection & Refraction

DHA - 01

Q 1 Figure shows two plane mirrors parallel to each other and an object O placed between them as shown. Then the distance of the first three images from the mirror M_2 will be (in cm)

Important question. Do again.



(A) 5, 10, 15 (B) 5, 10, 30
(C) 5, 25, 35 (D) 5, 15, 25

Q 2 The number of images observable between two parallel mirror is
(A) 6 (B) infinite
(C) 2 (D) 4

Q 3 A plane mirror reflecting a ray of incident light is rotated through an angle θ about an axis through the point of incidences in the plane of the mirror perpendicular to the plane of incidence. Then
(A) the reflected ray does not rotate
(B) the reflected ray rotates through an angle θ
(C) the reflected ray rotates through an angle 2θ
(D) the incident ray is fixed

Important question. Do again.

Q 4 A ray of light falls on a plane mirror making an angle of 60° with the mirror. On deviation, the ray of light deviates through an angle of

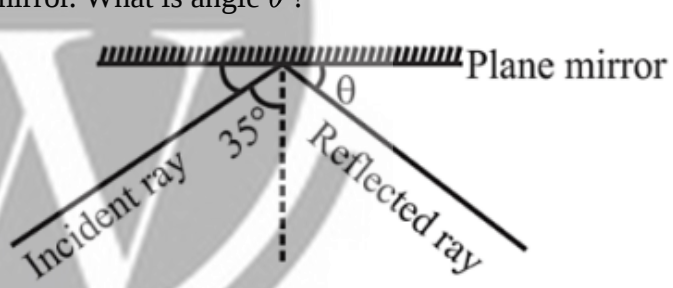
Important question. Do again.

(A) 120° (B) 140°
(C) 160° (D) 180°

Q 5 Air is not visible because it
(A) is nearly a perfectly transport substance
(B) neither absorbs nor reflects light
(C) transmits whole of light
(D) all of the above are correct

Q 6 The image of our face in a plane mirror is
(A) real (B) magnified
(C) diminished (D) none of these

Q 7 A ray of light is incident at an angle of 35° on a plane mirror. What is angle θ ?



(A) 35° (B) 45°
(C) 55° (D) none of these

Q 8 A boy is standing in front of a plane mirror at a distance of 3 m from it. What is the distance between the boy and his image?
(A) 3 m (B) 4.5 m
(C) 6 m (D) none of these

Q 9 A boy is standing at a distance of 3 m in front of a plane mirror. If the boy moves 1 m backward, the distance between the image and the boy is
(A) 2 m (B) 4 m
(C) 8 m (D) none of these

Important question Do again.

Answer Key

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

Hints & Solutions

Q 1 **Text Solution:**

Object distance in plane mirror is always equal to the image distance.

Video Solution:

Q 2 **Text Solution:**

$\text{No. of images } = \frac{360^{\circ}}{\theta} - 1$

Video Solution:

Q 3 **Text Solution:**

The angle of reflection is always equal to the angle of incidence

Video Solution:

Q 4 **Text Solution:**

Angle made by the emergent ray with the incident ray give the amount of deviation.

Video Solution:

Q 5 **Text Solution:**

We are able to see any object due to the light reflected from it.

Video Solution:

Q 6 **Text Solution:**

Image formed by a plane mirror is virtual, erect and of same size.

Video Solution:

Q 7 **Text Solution:**

During reflection from a Plane mirror, The angle of reflection is always equal to the angle of incidence.

Video Solution:

Q 8 **Text Solution:**

For image formation by a plane mirror, Object distance is always equal to the image distance.

Video Solution:

Q 9 **Text Solution:**

For image formation by a plane mirror, Object distance is always equal to the image distance.

Video Solution: