Q.1 When a beam of light is incident on a plane mirror, it is found that a real image is formed. The incident beam must be

(A)Converging(B)Diverging(C)Parallel(D)Formation of real image by a plane mirror is impossible

Q.2 A ray of light is approaching a set of three mirrors as shown in the diagram. The light ray is approaching the first mirror at an angle of 45° with the mirror surface. How many times will the ray reflect before it exits the system?



Q.3 Select the correct image of the given object when placed as shown.



Q.4 In the figure shown "O" represents the point object. Find the coordinates of the image formed by the plane mirror.



- Q.5 A small object is placed 10 cm in front of a plane mirror. If you stand behind the object 30 cm from the mirror and look at its image, the distance between the observer and the image of the object will be
 (A)60 cm (B)20cm (C)40cm (D)80cm
- **Q.6** When a plane mirror is placed horizontally on level ground at a distance of 60 m from the foot of a tower, the top of the tower and its image in the mirror subtends an angle of 90° at the corner of the mirror nearer to the foot of tower. The height of the tower is

(A)30 m

(D)120m



Q.7 A point source of light is placed in front of a plane mirror as shown in the figure. Determine the length of the reflected path of light on the screen (Σ).



Q.8 A point source of light S is placed at a distance L in front of the centre of plane mirror of length (d). A man walks in front of the mirror along a line parallel to the mirror, at a distance 2L as shown below. The distance over which the man can see the image of the light source in the mirror is



Q.9 A boy of height 1.5 m with eye level at 1.4 m stands before a plane mirror of length 0.75 m fixed on the wall. The height of the lower edge of the mirror above the floor is 0.8 m If the boy wants to see his feet in the mirror, then select the correct option.
(A)He will be able to see his feet.
(B)He will not be able to see his feet.

(C)He will be able to see his feet depend on his distance from mirror. (D)Data insufficient.

Q.10 A person AB of height 170 cm is standing in front of a plane mirror. His eyes are at height 164 cm. At what distance from P should a hole be made in the mirror so that he cannot see his hairs?



ANSWER KEY

Q.	1	2	3	4	5	6	7	8	9	10
Sol.	(A)	(B)	(A)	(D)	(C)	(B)	(C)	(C)	(B)	(A)