

ASSIGNMENT

CLASS X PHYSICS

- 31 A full length image of a distant tall building can definitely be seen by using
- (a) a concave mirror
 - (b) a convex mirror
 - (c) a plane mirror
 - (d) both concave as well as plane mirror

ANS: (b) Convex mirror has a wide field of view as it forms virtual, erect and diminished image.

Hence, full length of image of distant tall building can definitely be seen by using it.

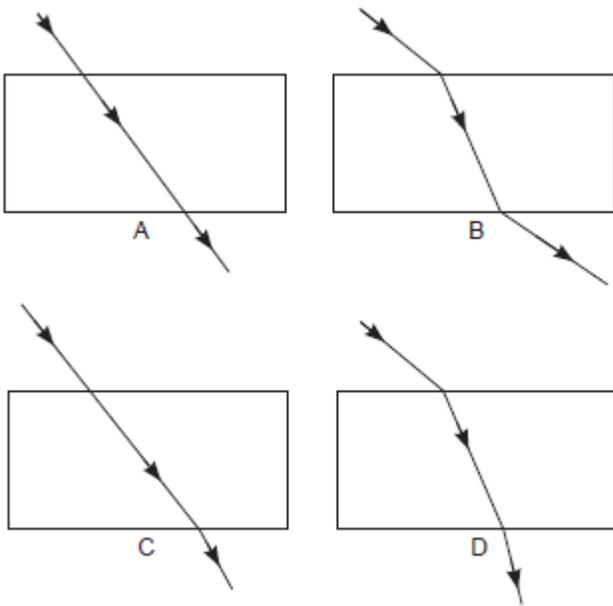
- 32 In torches, search lights and headlights of vehicles the bulb is placed
- (a) between the pole and the focus of the reflector
 - (b) very near to the focus of the reflector
 - (c) between the focus and centre of curvature of the reflector
 - (d) at the centre of curvature of the

ANS: (b) When source of light is placed very near to the focus of the reflector which are concave in shape, the reflected light becomes parallel to the principal axis.

- 33 The laws of reflection hold good for
- (a) plane mirror only
 - (b) concave mirror only
 - (c) convex mirror only
 - (d) all mirrors irrespective of their shape

ANS: (d) The laws of reflection hold good for light reflected from any smooth surface irrespective of their shapes.

- 34 The path of a ray of light coming from air passing through a rectangular glass slab traced by four students are shown as A, B, C and D in figure. Which one of them is correct?



(a) A (b) B

(c) C (d) D

ANS: (b) When a light ray is incident obliquely on one face of rectangular glass slab, the emergent ray will be parallel to the incident ray and shifted sideward slightly.

35 In which of the following, the image of an object placed at infinity will be highly diminished and point sized?

- (a) Concave mirror only
- (b) Convex mirror only
- (c) Convex lens only
- (d) Concave mirror, convex mirror, concave lens and convex lens.

ANS: (d) The incident ray coming from the object placed at infinity will be parallel to the principal axis. When the parallel beam of light incident on a mirror or lens, irrespective of their nature, after reflection/refraction, will pass or appear to pass through their principal focus. Hence highly diminished and point size image will be formed at their focus.

36 The questions given below consist of an assertion and the reason. Use the following key to choose the appropriate answer.

- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- (c) Assertion is true but the Reason is false.
- (d) The statement of the Assertion is false but the Reason is true. Assertion: Incident light is reflected in only one direction from a smooth surface.

Reason: Since the angle of incidence and the angle of reflection are same, a beam of parallel rays of light falling

on a smooth surface is reflected as a beam of parallel light rays in one direction only.

ANS: (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

37 The questions given below consist of an assertion and the reason. Use the following key to choose the appropriate answer.

- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- (c) Assertion is true but the Reason is false.

(d) The statement of the Assertion is false but the Reason is true. Assertion: The word AMBULANCE on the hospital vans is written in the form of its mirror as AMBULANCE .

Reason: The image formed in a plane mirror is same size of the object.

ANS: (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

38 The questions given below consist of an assertion and the reason. Use the following key to choose the appropriate answer.

- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- (c) Assertion is true but the Reason is false.

(d) The statement of the Assertion is false but the Reason is true. Assertion: Cannot see the distant object clearly.

Reason: The far point of an eye suffering from myopia is less than infinity.

ANS: (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

39 The questions given below consist of an assertion and the reason. Use the following key to choose the appropriate answer.

- (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- (b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- (c) Assertion is true but the Reason is false.

(d) The statement of the Assertion is false but the Reason is true. Assertion: Pupil is black in colour.

Reason: Pupil is black in colour as no light is reflected in it.

ANS: (a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

40 The questions given below consist of an assertion and the reason. Use the following key to choose the appropriate answer.

(a) Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.

(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(c) Assertion is true but the Reason is false.

(d) The statement of the Assertion is false but the Reason is true. Assertion: The rainbow is a man made spectrum of sunlight in the sky.

Reason: The rainbow is formed in the sky when the sun is shining and it is raining at the same time.

ANS: (a) The statement of the Assertion is false but the Reason is true.