



WORKSHEET -2

CLASS X

CHAPTER 10

Q1) A student studies that a convex lens always forms a virtual image irrespective of its position. What causes the convex mirror to always form a virtual image?

- (a) Because the reflected ray never intersects
- (b) Because the reflected ray converges at a single point
- (c) Because the incident ray traces its path back along the principal axis
- (d) Because the incident ray of a convex mirror gets absorbed in the mirror

Correct Answer: Option (a)

Q2) A 10 mm long awl pin is placed vertically in front of a concave mirror. A real image of the pin is formed at 30 cm in front of the mirror. The focal length of this mirror is:

- (a) -30 cm
- (b) -20 cm
- (c) -40 cm
- (d) -60 cm

Correct Answer: Option (b)

Q3) Rahul conducts an experiment using an object of height 10 cm and a concave lens with focal length 20 cm. The object is placed at a distance of 25 cm from the lens. Can the image be formed on a screen?

- (a) Yes, as the image formed will be real
- (b) Yes, as the image formed will be erect
- (c) No, as the image formed will be virtual
- (d) No, as the image formed will be inverted

Correct Answer: Option (c)

Q4) Magnification produced by a rear view mirror fitted in vehicles:

- (a) Is less than one
- (b) Is more than one
- (c) Is equal to one
- (d) Can be more than or less than one depending upon the position of the object in front of it

Correct Answer: Option (a)

Q5) A student conducts an activity using a concave mirror with focal length of 10 cm. He placed the object 15 cm from the mirror. Where is the image likely to form?

- (a) At 6 cm behind the mirror
- (b) At 30 cm behind the mirror
- (c) At 6 cm in front of the mirror
- (d) At 30 cm in front of the mirror

Correct Answer: Option (d)

Q6) The image of an object placed in front of a convex mirror is formed at

- (a) The object itself
- (b) Twice the distance of the object in front of the mirror
- (c) Half the distance of the object in front of the mirror
- (d) Behind the mirror

Correct Answer: Option (d)

Q7) A full length of image of a distant tall building can definitely be seen using:

- (a) A concave mirror
- (b) A convex mirror
- (c) A plane mirror
- (d) Both concave as well as plane mirror

Correct Answer: Option (b)

Q8) A student conducts an activity using a flask of height 15 cm and a concave mirror. He finds that the image formed is 45 cm in height. What is the magnification of the image?

- (a) -3 times
- (b) $-1/3$ times
- (c) $1/3$ times
- (d) 3 times

Correct Answer: Option (d)

Q9) Which of the following can make a parallel beam of light from a point source incident on it?

- (a) Concave mirror as well as convex lens
- (b) Convex mirror as well as concave lens
- (c) Two plane mirrors placed at 90 degree to each other
- (d) Concave mirror as well as concave lens

Correct Answer: Option (a)

Q10) A student studies that the speed of light in air is 300000 kms/ sec where that of speed in a glass slab is about 197000 kms/ sec. What causes the difference in speed of light in these two media?

- (a) Difference in density
- (b) Difference in temperature
- (c) Difference in amount of light
- (d) Difference in direction of wind flow

Correct Answer: Option (a)

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