Q.1 An object AB of height 5 cm has been kept at a distance of 30 cm in front of a concave mirror with radius of curvature 50 cm. Which of the following is incorrect as per sign convention?



Q.2 Which of the following options represents incorrect ray diagram for a concave mirror?



- Q.3 A boy 2 m tall stands at a distance 40 cm in front of a mirror. He sees an erect image 1 m high. The nature of mirror is

 (A)Concave
 (B)Convex
 (D)Either convex or concave
- **Q.4** An object is placed at a distance of 40 cm from a concave mirror of focal length 15 cm. If the object is displaced through a distance of 20 cm towards the mirror, the displacement of the image will be



- Q.5 Find the position and nature of the image formed by the concave mirror of focal length 20 cm, if the object 0 is placed at a distance 30 cm from the pole
 (A)-60 cm, Virtual image
 (B)+60 cm, Real image
 (D)+60 cm, Virtual image
- **Q.6** Find the distance and nature of the image formed by the concave mirror as shown in the figure



(A) $-\frac{40}{3}$ cm, Real image

(C) +
$$\frac{40}{3}$$
 cm, Real image

(D)+ $\frac{40}{3}$ cm, Virtual image

Q.7 A convex mirror used for rear-view on an automobile has a radius of curvature of 3.00 m. If a bus is located at 5.00 m from this mirror, find the position & nature of the image.



(A)v = 1.15 m, Virtual Image (C)v = 0.86 m, Virtual Image



Q.8 A concave mirror of focal length f produces an image n times the size of the object. If the image is real, then the distance of the object from the mirror is



Q.9 The figure shows a spherical concave mirror with its pole at (0, 0) and principal axis along x – axis. There is a point object 0 at (-40 cm, 1 cm). The position of the image is



Q.10 An object is placed in front of a concave mirror of radius of curvature 40 cm at a distance of 10 cm from pole. Find the nature and magnification of the image.

(A)|m| = 1.5; Nature:- virtual, erect \& enlarged

(B)|m| = 2; Nature:- real, inverted & enlarged

(C)|m| = 2; Nature:- virtual, erect \& enlarged

(D)|m| = 1.5; Nature:- real, inverted \& enlarged

ANSWER KEY

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