Subject -physics

1. Name the type of mirror used in following situations:
i.) Headlights of a car
ii.) Rear-view mirror of a vehicle
iii.) Solar furnace
Support your answer with reason

2. An object is placed at a distance of 10cm from a convex mirror of focal length 15cm. Find the position and nature of the image.

3. An object 5cm in length is placed at a distance of 20cm infront of a convex mirror of radius of curvature 30cm. Find the position of the image, its nature and size

4. An object of size 7cm is placed at 27cm infront of a concave mirror of focal length 18cm. At what distance from the mirror should a screen be placed, so that a sharp focused image can be obtained? Find the size and nature of the image.

5. Find the focal length of a concave mirror whose radius of curvature is 32 cm.

6. A concave mirror produces three times magnified real image of an object placed at 10cm infront of it. Where is the image located

7. An object is placed at a distance of 30cm from a convex mirror of focal length 15cm. Find the position where the image is formed.

8. An object is placed perpendicular to the principal axis of a convex mirror of focal length 10 cm. The distance of the object from the pole of the mirror is 10cm. Find the position of the image formed.

9. A security mirror used in a big showroom has radius of curvature 5m. If a customer is standing at a distance of 20m from the cash counter, find the position, nature and size of the image formed in the security mirror.

10. A concave mirror produces three times magnified image on a screen. If the object is placed 20cm infront of the mirror, how far is the screen from the object.