OPTICS REFLECTION

1. As the angle of incidence is increased for a ray incident on a reflecting surface, the angle between the incident and reflected rays ultimately approaches what value?
a. zero
b. 45 degrees
c. 90 degrees
d. 180 degrees

2. A concave mirror with a focal length of 10.0m creates a real image 30.0 cm away on its principal axis; the corresponding object is located how far from the mirror?
a. 20.0 cm
b. 15.0 cm
c. 7.5 cm
d. 5.0 cm

3. Which of the following best describes the image formed by a plane mirror?
a. virtual, inverted and enlarged
b. real, inverted and reduced
c. virtual, upright and the same size as object
d. real, upright and the same size as object

4. Which of the following best describes the image formed by a concave mirror when the object is located somewhere between the focal point (F) and the center of curvature (C) of the mirror?
a. virtual, upright and enlarged
b. real, inverted and reduced
c. virtual, upright and reduced
d. real, inverted and enlarged

5. When the image of an object is seen in a plane mirror, the image is ____.
a. real and upright.
b. real and inverted.
c. virtual and upright.
d. virtual and inverted.

6. When the image of an object is seen in a plane mirror, the distance from the mirror to the image depends on ____.
a. the wavelength of light used for viewing.
b. the distance from the object to the mirror.
c. the distance of both the observer and the object to the mirror.
d. none

7. When the image of an object is seen in a concave mirror the image will ____.
a. always be real.
b. always be virtual.
c. be either real or virtual.
d. will always be magnified.

8. When the image of an object is seen in a convex mirror the image will ____.
a. always be real.
b. always be virtual.
c. may be either real or virtual.
d. will always be magnified.

9. Rays of light traveling parallel to the principal axis of a concave mirror will come together ____.
a. at the center of curvature.
b. at the focal point.
c. at infinity.
d. at a point half way to the focal point

10. Focal length of plane mirror is
a. At infinity
b. Zero
c. Negative
d. None of these

11. The radius of curvature of a mirror is 20cm the focal length is
a. 20cm
b. 10cm
c. 40cm
d. 5cm

12. When light is reflected from a mirror a change occurs in its -
a. Frequency
b. Amplitude
c. Wavelength

d. Velocity

13. Mark the correct options -
a. If the incident rays are converging, we have a real object.
b. If the final rays are converging, we have a real image.
c. The image of a virtual object is called a virtual image.
d. If the image is virtual, the corresponding object is called a virtual object.

14. A point source of light is placed in front of a plane mirror –
a. All the reflected rays meet at a point when produced backward
b. Only the reflected rays close to the backward
c. Only the reflected rays making a small angle with the mirror, meet at a point when produced backward
d. Light of different colours make different images

15. Which of the following letters do not suffer lateral inversion –
a. HGA
b. HOX
c. VET
d. YUL

Answers key

1.(d) 2.(b) 3.(c) 4.(d) 5.(c) 6.(b) 7.(c) 8.(b) 9.(b) 10.(a)

11.(b) 12.(b) 13.(b) 14.(a) 15.(b)