

## Light: Reflection & Refraction

1) Assertion :- Radius of curvature of a spherical mirror is half of its focal length.

Reason :- A ray of light incident parallel to principal axis after reflection passes through C.

Ans. - (C) A is False but R is True.

2) Assertion :- After reflection through a rectangular glass slab, emergent ray is parallel to the direction of the incident ray.

Reason - Refractive index of glass and air are different.

Ans. - b) both A and R are true but R is not the correct explanation for A.

3) Assertion - Magnification of real image is negative.

Reason - magnification is ratio of ~~real~~ image distance and object distance.

Ans. - b) both A and R are true but R is the correct explanation for A.

4) Assertion - Convex mirror is used as a side mirror.

Reason - Convex mirror always forms a enlarged image.

Ans. - c) Both A and R are false.

5) Assertion: - The twinkling of stars are due to the reflection of light.

Reason: - The velocity of light changes while going from one medium to another medium.

Ans: -  $c \Rightarrow A$  is ~~too~~ false but  $R$  is True.

6) Assertion: - Plane mirror may form virtual image.

Reason - Plane mirror forms virtual image if object is real.

Ans: -  $A$  is False,  $R$  is True.

7) Assertion - when a concave mirror is held under water, its focal length will decrease.

Reason - The focal length of a concave mirror is interdependent of the medium in which it is placed.

Ans: - a) Both  $A$  and  $R$  are correct and  $R$  is the correct explanation of  $A$ .

8) Assertion - Refractive index has no unit.

Reason - The refractive index is a ratio of two similar quantities.

Ans: - a) Both  $A$  and  $R$  are correct and  $R$  is the correct explanation of  $A$ .

9) Assertion - Concave mirror has real focus.

Reason - Concave mirror always forms a