1> Assertion: when a concave mirror is held under water, its focal length will increase.
Reason: The focal length of a concave mirror is independ of the medium in which it is placed.

Ans:- (d) Assertion (A) is false but Reason (R) is true.

2> Assertion: A virtual image cannot be photograp-hed.
Reason: Only real objects are photographed.
Ans:- (c) Assertion (A) is True but Reason (R) is false.

3> Assertion: Red light travels faster in glass than green light.
Reason :- The refractive index of glass is less for red light than for green light.

Ans:- (a) Both Assertion (A) and Reason (R) are true and Reason (R) is correct explanation for assertion (A).

4) Assertion :- As light travels from one medium to another, the frequency of light does not change.
Reason : Because frequency ~~of light does not change~~ is the characteristics of source.

Ans: a) Both Assertion (A) and reason (R) are ~~true~~ true and Reason (R) is the correct explanation of assertion (A).

5) Assertion: As the temperature of a medium increases the refractive index decreases.

Reason:- when a ray traveles from vallum to a medium, then μ is known as absolute refractive index of the medium.

Ans:- b) Both Assertion (A) and reason (R) are true but Reason (R) is not the correct explanation of Assertion (A).