

### I. Choose the correct answer.

1. A ray of light passes from one medium to another medium. Refraction takes place when angle of incidence is  
a)  $0^\circ$     b)  $45^\circ$     c)  $90^\circ$
2. \_\_\_\_\_ is used as reflectors in torchlight.  
a) Concave mirror    b) Plane mirror  
c) Convex mirror
3. We can create enlarged, virtual images with  
a) concave mirror    b) plane mirror  
c) convex mirror
4. When the reflecting surface is curved outwards the mirror formed will be  
a) concave mirror    b) convex mirror  
c) plane mirror
5. When a beam of white light passes through a prism it gets  
a) reflected    b) only deviated  
c) deviated and dispersed
6. The speed of light is maximum in  
a) vacuum    b) glass    c) diamond

### II. State whether true or false. If false, correct the statement.

1. The angle of deviation depends on the refractive index of the glass.
2. If a ray of light passes obliquely from one medium to another, it does not suffer any deviation.
3. The convex mirror always produces a virtual, diminished and erect image of the object.
4. When an object is at the centre of curvature of concave mirror the image formed will be virtual and erect.
5. The reason for brilliance of diamonds is total internal reflection of light.

### III. Fill in the blanks.

1. In going from a rarer to denser medium, the ray of light bends \_\_\_\_\_.



2. The mirror used in search light is \_\_\_\_\_.
3. The angle of deviation of light ray in a prism depends on the angle of \_\_\_\_\_.
4. The radius of curvature of a concave mirror whose focal length is 5cm is \_\_\_\_\_.
5. Large \_\_\_\_\_ mirrors are used to concentrate sunlight to produce heat in solar furnaces.

### IV. Match the following.

Ratio of height of image to height of object.	Concave mirror
Used in hairpin bends in mountains.	Total internal reflection
Coin inside water appearing slightly raised.	Magnification
Mirage	Convex mirror
Used as Dentist's mirror.	Refraction

### V. Assertion and reason type questions.

Mark the correct choice as:

- a) If both assertion and reason are true and reason is the correct explanation.
- b) If both assertion and reason are true and reason is not the correct explanation.
- c) If assertion is true but reason is false.
- d) If assertion is false but reason is true.

1. Assertion: For observing the traffic at a hairpin bend in mountain paths a plane mirror is preferred over convex mirror and concave mirror.  
Reason: A convex mirror has a much larger field of view than a plane mirror or a concave mirror.
2. Assertion: Incident ray is directed towards the centre of curvature of