### Class VII: Science Chapter 15: LIGHT

- You cannot see flame of a lighted candle through a bent pipe, but you can see it through a straight pipe, because
  - (a) Light travels in a straight line
  - (b) Pipe is polished
  - (c) Bent pipe was blocked
  - (d) All of these
- 1 (a) You cannot see flame of a lighted candle through a bent pipe, but you can see it through a straight pipe, because light travels in a straight line.
- When light falls on a polished or a shiny surface
  - (a) The light is absorbed by it
  - (b) The direction of light changes
  - (c) The light gets deflected indifferent directions
  - (d) All of these
- 2 (b) When light falls on a polished or a shiny surface the direction of light changes.
- 3 The change of direction of light by a mirror is called
  - (a) Beam of light
  - (b) Searchlight
  - (c) Reflection of light
  - (d) Path of light
- 3 (c) The change of direction of light by a mirror is called reflection of light.
- 4 Direction of reflected light changes if
  - (a) The mirror is rotated slightly
  - (b) The object is moved sideways
  - (c) Both (a) and (b)
  - (d) None of these
- 4 (c) Direction of reflected light changes if the mirror is rotated slightly or the object is moved sideways.
- 5 Objects become visible to us because
  - (a) Light is absorbed by the object
  - (b) Light is reflected by the object before reaching our eyes

- (c) Objects obstruct the path of light
- (d) None of these
- 5 (b)Objects become visible to us because light is reflected by the object before reaching our eyes.
- 6 Another candle appears behind the mirror when we place a candle of it.
  - (a) The candle behind the mirror is known as the image
  - (b) The candle in front of the mirror is called the object
  - (c) A candle is a candle whether in front or behind the mirror
  - (d) Both (b) and (c)
- 6 (d)Another candle appears behind the mirror when we place a candle of it. The candle behind the mirror is known as the image and the candle in front of the mirror is called the object.
- 7 Size of the image formed by a plane mirror is
  - (a) Of smaller size if the mirror is larger
  - (b) Of smaller size if the mirror is smaller
  - (c) Of same size as the object does not matter if the mirror is small or large
  - (d) Of larger size if the mirror is larger
- 7 (c) Size of the image formed by a plane mirror is of same size as the object does not matter if the mirror is small or large.
- 8 The image formed by a plane mirror will be
  - (a) Larger
  - (b) Erect
  - (c) Inverted
  - (d) Tilted
- 8 (b) The image formed by a plane mirror will be erect.
- 9 The distance of the image from the mirror is
  - (a) More than the distance of object from the mirror
  - (b) Less than the distance of object from the mirror
  - (c) Same as the distance of the object from the mirror
  - (d) None of these
- 9 (c) The distance of the image from the mirror is same as the distance of the object from the mirror

- 10 The image can be obtained on a screen, if
  - (a) The screen is placed behind the plane mirror
  - (b) The screen is placed in front of the plane mirror
  - (c) The screen is placed in front or behind the plane mirror
  - (d) The image cannot be obtained on a screen using a plane mirror
- 10 (d) The image cannot be obtained on a screen using a plane mirror
- 11 In the image obtained by a plane mirror, left side of the object appears to be
  - (a) On left side of the image
  - (b) On right side of the image
  - (c) On top of the image
  - (d) On bottom of the image
- 11 (b) In the image obtained by a plane mirror, left side of the object appears to be on right side of the image.
- 12 In the side mirror of a car the images of all the objects appear
  - (a) Equal to the objects themselves
  - (b) Smaller than the objects themselves
  - (c) Larger than the objects themselves
  - (d) As points
- 12 (b) In the side mirror of a car the images of all the objects appear smaller than the objects themselves.
- 13 The shape of a mirror can be
  - (a) Plane
  - (b) Convex
  - (c) Concave
  - (d) All the three
- 13 (d) The shape of a mirror can be Plane, Convex or Concave.
- 14 Concave mirror has its reflecting (shining) surface
  - (a) Bulging in
  - (b) Bulging out
  - (c) Like the outer surface of a spoon
  - (d) Both (b) and (c)

- 14 (d) Concave mirror has its reflecting (shining) surface bulging out or like the outer surface of a spoon.
- 15 Convex mirror has its reflecting (shining) surface
  - (a) Similar to the inner surface of a spoon
  - (b) Bulging in
  - (c) Both (a) and (b)
  - (d) Neither (a) nor (b)
- 15 (c) Convex mirror has its reflecting (shining) surface similar to the inner surface of a spoon or bulging in.
- 16 An image that cannot be obtained on a screen is called a
  - (a) Real Image
  - (b) Virtual Image
  - (c) Erect Image
  - (d) Inverted image
- 16 (a) An image that cannot be obtained on a screen is called a real image.
- 17 By using a concave mirror we can see an image that is
  - (a) Real or Virtual
  - (b) Smaller or larger than the object
  - (c) Inverted or Erect
  - (d) All of these
- 17 (d) By using a concave mirror we can see an image that is Real or Virtual, Smaller or larger than the object, Inverted or Erect.
- 18 By using a convex mirror we can see an image that is
  - (a) Real, Inverted and Enlarged
  - (b) Virtual, Erect and Diminished
  - (c) Real, Erect and Diminished
  - (d) Virtual, Erect and Enlarged
- 18 (b) By using a convex mirror we can see an image that is Virtual, Erect and Diminished.
- 19 Those lenses which feel thicker in the middle than at the edges are
  - (a) Convex lenses
  - (b) Diverging lenses
  - (c) Magnifying lenses

- (d) Magnifying glasses or convex lenses
- 19 (d) Those lenses which feel thicker in the middle than at the edges are magnifying glasses or convex lenses.
- 20 Those transparent glasses which feel thinner in the middle than at the edges are
  - (a) Concave lenses
  - (b) Magnifying glasses
  - (c) Used in microscopes
  - (d) Used in telescopes
- 20 (a) Those transparent glasses which feel thinner in the middle than at the edges are concave lenses
- 21 The nature and size of an object depend upon
  - (a) The time of conducting the experimenting
  - (b) The position of the object
  - (c) The kind of the object
  - (d) The position of the object in case of mirrors only
- 21 (b) The nature and size of an object depend upon the position of the object.
- 22 Concave lenses are also known as the
  - (a) Diverging lenses because they diverge light
  - (b) Converging lenses because they converge light to a point
  - (c) Diverging lenses because they bend the light outward
  - (d) Only (a) and (c)
- 22 (d) Concave lenses are also known as the diverging lenses because they diverge light or they bend the light outward.
- 23 Sunlight consists of
  - (a) White colour only
  - (b) Five colours
  - (c) Seven colours
  - (d) Blue colour
- 23 (c) Sunlight consists of seven colours
- 24 The correct sequence of seven colours of a rainbow is
  - (a) Blue, Orange, Red, White, Purple, Yellow, Green
  - (b) Violet, Blue, Indigo, Green, Red, Yellow, Orange
  - (c) Red, Orange, Yellow, Green, Blue, Indigo, Violet

- (d) Red, Orange, Yellow, Green, Violet, Indigo, Blue
- 24 (c) The correct sequence of seven colours of a rainbow is: Red, Orange, Yellow, Green, Blue, Indigo, Violet
- 25 If a small circular disc with seven rainbow colours painted on it is rotated, we see
  - (a) The seven colours rotating in the same sequence
  - (b) The seven colours become brighter
  - (c) Black colour
  - (d) White colour
  - 25 (d) If a small circular disc with seven rainbow colours painted on it is rotated, we see white colour.

### Class 7 L-15 LIGHT

#### Difficult questions

- 1. Which of the following mirror is used by the doctors?
  - (a) Convex.
  - (b) Plane.
  - (c) Concave.
  - (d) Both concave and convex.

**Ans:** (c)

**Explanation:** Doctors use concave mirror for examination of organs like ears, eyes, throat, teeth, etc. for seeing their enlarged image.

- 2. Reflector of a torch has-
  - (a) Plain surface.
  - (b) Concave surface.
  - (c) Convex surface.
  - (d) Irregular surface.

**Ans:** (b)

**Explanation:** Reflectors of headlights of vehicles and torches are concave in shape because they diverge light in different directions.

## 3. Can you identify lenses just by touching?

- (a) No.
- (b) Yes.
- (c) Only convex lenses.
- (d) Only concave lenses.

**Ans:** (b)

**Explanation:** Both concave and convex lenses can be identified just by touching. Convex lenses are thicker in the middle than from the edges while concave lenses are thicker at the edges than in the middle.

- 4. A circular disc with all the seven colours of rainbow painted on it in correct sequence, is called-
  - (a) Circular disc.
  - (b) Rainbow disc.
  - (c) VIBGYOR disc.
  - (d) Newton's disc.

**Ans:** (d)

**Explanation:** Newton's disc is a circular disc painted with seven colours of rainbow in correct sequence i.e. VIBGYOR. When it is rotated fast, it appears white in colour.

# 5. We can see a rainbow only when-

- (a) Our face is towards the Sun.
- (b) Our back is towards the Sun.
- (c) We look at the Sun.
- (d) We look anywhere in the sky.

**Ans:** (b)

**Explanation:** We can see a rainbow only when our back is towards the Sun.

