O P JINDAL SCHOOL, SAVITRINAGAR

ASSIGNMENT

CLASS X PHYSICS

41 _____ mirror is used as a security mirror in shops and on roads at sharp bends and concealed entrances.   1

   ANS: Convex

42 The refractive index of a transparent medium is the ratio of the speed of light in _____ to that in the _____.   1

   ANS: vacuum, medium

43 If the magnification has a minus sign, then the image is _____ and _____.   1

   ANS: real, inverted

44 The focal length of a lens is the distance between _____ and _____ of the lens.   1

   ANS: optical centre, principal focus

45 The focal length of a concave lens is considered to be _____.   1

   ANS: negative

46 In order to calculate the power of a lens, we need its focal length in _____.   1

ANS: metres

47 Angle of refraction cannot exceed 90°. [True/False]   1

ANS: True

48

When incident angle i satisfies n = $\dfrac{1}{\sin i}$, the refracted light will pass along the surface. [True/False]   1

ANS: True

49 A person standing in front of a mirror finds his image larger than himself. This shows that mirror is convex in nature.   1
   [True/False]

ANS: False

$$-\frac{v}{u} = \frac{1}{m} \quad \Rightarrow \quad v = -\frac{u}{m}$$

$$\text{Using, } \frac{1}{f} = \frac{1}{v} + \frac{1}{u} = -\frac{m}{v} + \frac{1}{v} = -\frac{(m-1)}{v}$$

Convex mirror always forms a diminished image so it is false statement $\therefore \quad u = -(m-1)f$ i.e., the
object distance from the mirror is numerically equal to (m − 1)f.

50 Lateral displacement increases with the thickness of the given slab. [True/False]   1

ANS: True