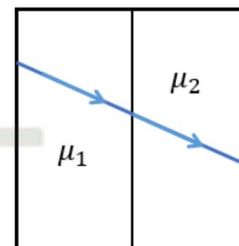


10. The ray of light entering into a rectangular glass slab emerges from the slab. The incident ray and emergent ray are:
- Parallel
  - Makes an acute angle
  - Perpendicular
  - Makes an obtuse angle
11. The refractive index of air with respect to water is 1.33. Then refractive index of water with respect to air is,
- 0.35
  - 0.45
  - 0.65
  - 0.75
12. The refractive index of glass is 1.5. Then velocity of which light is minimum in the glass,
- Violet
  - Red
  - Yellow
  - Green
13. The refractive index of glass is 1.5 and water is 1.33. Then what is the critical angle for glass water interface,
- $48^\circ$
  - $54.6^\circ$
  - $56^\circ$
  - $62.63^\circ$
14. A light ray is passed from one medium of refractive index  $\mu_1$  to another medium of refractive index  $\mu_2$  as shown in fig. The correct relation between
- $\mu_1 > \mu_2$
  - $\mu_1 = \mu_2$
  - $\mu_2 > \mu_1$
  - Cannot find relation



15. If the refractive index of water is  $\frac{4}{3}$  and that of glass slab immersed in it is  $\frac{5}{3}$ . What is critical angle for a ray of light tending to go from glass to water?
- $\sin^{-1}\left(\frac{2}{3}\right)$
  - $\sin^{-1}\left(\frac{3}{4}\right)$
  - $\sin^{-1}\left(\frac{4}{3}\right)$
  - $\sin^{-1}\left(\frac{4}{5}\right)$
16. Light from vacuum enters to a medium of  $\mu = 1.5$ . If it crosses it within a nanosecond, the thickness of the medium is,
- 10cm
  - 20cm
  - 40cm
  - 70cm
17. A, B and C are three optical media of respective critical angles  $C_1$ ,  $C_2$  and  $C_3$ . Total internal reflection can occur from A to B and also from B to C but not from C to A. The correct relation for the critical angles will be,
- $C_1 > C_2 > C_3$
  - $C_1 = C_2 = C_3$
  - $C_1 < C_2 < C_3$
  - $C_3 > C_2 > C_1$
18. A mark at the bottom of the tank 1m deep appears to be raised by 0.1m. The value of refractive index of liquid tank is;
- $\frac{10}{9}$
  - 10
  - $\frac{4}{3}$
  - $\frac{1}{10}$