

## Class 12 Physics Chapter 9 Ray Optics and Optical Instruments MCQs

1. Which of the following lights deviates the most when it passes through a prism?
  - (a) Red Light
  - (b) Violet Light
  - (c) Neither (a) nor (b)
  - (d) Both (a) and (b)
2. Which of the following light phenomena of light results in a mirage?
  - (a) Refraction of light
  - (b) Reflection of light
  - (c) Total Internal reflection
  - (d) Diffraction of Light
3. For which of the following is the field of view maximum?
  - (a) Concave mirror
  - (b) Convex mirror
  - (c) Plane mirror
  - (d) Cylindrical mirror
4. What happens when the light is refracted into a medium?
  - (a) Both frequency and wavelength of the light increases
  - (b) The wavelength increases but the frequency remain unchanged
  - (c) Both wavelength and frequency decreases
  - (d) The wavelength decreases but the frequency remain constant
5. If a glass prism is dipped in water, what happens to its dispersive power?
  - (a) Increases
  - (b) Decreases
  - (c) Does not change
  - (d) No effect
6. What should be increased to increase the angular magnification of a simple microscope?
  - (a) The power of the lens
  - (b) The focal length of the lens
  - (c) Lens Aperture

(d) Object Size

**7. Which of the following phenomenon is used in optical fibre?**

- (a) Refraction
- (b) Diffraction
- (c) Scattering
- (d) Total Internal Reflection

**8. Which of the following statements is true of total internal reflection?**

- (a) Light travels from rarer medium to denser medium
- (b) Light travels from denser medium to rarer medium
- (c) Light travels in water only
- (d) Light travels in the air only

**9. A convex lens is dipped in a liquid whose refractive index is equal to the refractive index of the lens. Then what is its focal length?**

- (a) Focal Length will become zero
- (b) Focal Length will become infinite
- (c) Focal length will reduce, but not become zero
- (d) Remains unchanged

**10. For a telescope, the larger the diameter of the objective lens**

- (a) Greater the resolving power
- (b) Greater the magnifying power
- (c) smaller the resolving power
- (d) smaller the magnifying power

\*\*\*\*\*Answer Key\*\*\*\*\*

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|-------|-------|-------|-------|--------|
| 1-(b) | 2-(c) | 3-(b) | 4-(b) | 5-(b)  |
| 6-(a) | 7-(d) | 8-(b) | 9-(b) | 10-(b) |