

SLIP TEST- 5
CHAPTER- 5 : REFRACTION OF LIGHT AT PLANE SURFACES

Name:..... Section:..... Roll No:..... Max.Marks:20

I. Answer the following questions. Each carries four marks. 2 x 4 = 8 M

1) In which of the following substances does the light travels fastest? In which the light travels slowest? Explain by using the formula of Refractive index.

	Air	Ice	Kerosene	Water
Refractive Index	1.003	1.31	1.44	1.33

2) Define critical angle. If 'C' is the critical angle, then what is the formula for "sin C"? Explain with a neat diagram?

II. Answer the following questions briefly. Each carries two marks. 2 x 2 = 4 M

3) What is Total internal reflection? What are the condition for Total internal reflection?

4) Explain the formation of mirages.

III. Answer the following in one or two sentences. Each carries one marks. 2 x 1 = 2 M

5) Write Snell's law of refraction.

6) On which factors does the refractive index depend?

IV. Choose the correct choice and write down in the given brackets. 6 x 1 = 6 M

7) The refractive index of glass with respect to air is 2. Then the critical angle of glass-air interface is []

- A. 0° B. 45° C. 30° D. 60°

8) Total internal reflection takes place when the light ray travels from..... []

- A. rarer to denser medium B. rarer to rarer medium
C. denser to rarer medium D. denser to denser medium

9) Relative refractive index of second media with respect to the first media (η_{21}) =..... []

- A. $\frac{n_2}{n_1}$ B. $\frac{n_1}{n_2}$ C. $\frac{1}{(n_1+n_2)}$ D. $\frac{1}{(n_1-n_2)}$

10) Refractive Index []

- A. $\frac{\text{Thickness of the glass slab}}{\text{Thickness of the glass slab}-\text{Vertical shift}}$ B. $\frac{\text{Thickness of the glass slab}}{\text{Thickness of the glass slab}+\text{Vertical shift}}$

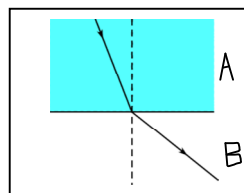
- C. $\frac{\text{Thickness of the glass slab}}{\text{Thickness of the glass slab}-\text{Lateral shift}}$ D. $\frac{\text{Thickness of the glass slab}}{\text{Thickness of the glass slab}+\text{Lateral shift}}$

11) When light travels from one media to another media, Changing the direction of light ray at the interface is []

- A. reflection B. refraction C. diffraction D. dispersion

12) According to the given figure, which is true []

- A. 'A' is rarer media, 'B' is denser media
B. 'A' is denser media, 'B' is rarer media
C. choice(A) and choice(B)
D. Neither choice(A) nor choice(B)



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