PHYSICS

BOOKS - CHETANA PHYSICS (MARATHI ENGLISH)

Unit Test 3

Exercise

1. The branch of Physics which deals with the production of transmission and reception of

sound is called

A. reverberation

B. Acoustics

C. Pitch

D. Doppler effect

Answer:

▶ **Watch Video Solution**

2. The equation shown below is

$$\frac{n_2 - n_1}{R} = \frac{n_2}{v} - \frac{n_1}{u}$$

A. Prism formula

B. Dispersive power

C. Dispersion at a spherical surface

D. Lens makers equation

Answer:

▶ **Watch Video Solution**

3. What is the magnitude of charge on an electron?

A. $1.6 \times 10^{-9} C$

B. $9.1 \times 10^{-31} C$

C. $1.732 \times 10^{-11} C$

D. $6.67 \times 10^{-11} C$

Answer:

▶ **Watch Video Solution**

4. The product of the magnitude of the charge and the distance between the two charges on a dipole, is called

A. Electric dipole

B. Electric pole strength

C. Electric dipole moment

D. Electric intensity

A. Electric dipole

B. Electric pole strength

C. Electric dipole moment

D. Electric intensity

Answer:

▶ **Watch Video Solution**

5. State Gauss Law

▶ **Watch Video Solution**

6. Define Dispersive Power.

▶ **Watch Video Solution**

7. Calculate the velocity of sound if the frequency of the wave is 4 Hz and the wavelength of the wave is 80 meters.

▶ **Watch Video Solution**

8. Define Total internal reflection

▶ **Watch Video Solution**

9. Define Mirage

10. Write a note on periscope. (Diagram essential)

11. A man shoutsloudly close to a high wall, he hears an echo. If the man is 40 mfrom the wall,

how long after he shouts, will the echo is heard, (speed of sound is $330m/s$)

12. State law of characteristics of electric lines of force.

13. Draw a well labelled diagram for magnifying power of a simple microscope.

14. State Coulombs Law and Define relative permitivity.

15. For a dense flint glass prism of refracting angle 10^0, Findthe anangular deviation for extreme colours and the dispersive ppower for

dense flint glass. ($n_{red} = 1.712$, $n_{vio \leq t} = 1.792$)

16. Derive an expression for couple acting on an electric dipole kept in a uniform electric field.

17. Explain the effect of change in temperature on the speed of sound in air.

18. Derive an expression for electric field intensity of a point on the equatorial line.

19. Derive an expression for magnifying power of a compound microscope.

▶ **Watch Video Solution**

20. Derive an expression for apparent frequency when the source is moving and listener is stationery

▶ **Watch Video Solution**