

# PHYSICS CHAPTER 4

1) Define light?

- ❖ Light is the invisible energy which causes sensation of sight (vision).

2) List properties of light?

- ❖ The properties of light are:
  - ✓ Rectilinear propagation
  - ✓ Reflection
  - ✓ Refraction
  - ✓ Diffraction
  - ✓ Interference

3) What is the primary source of light?

- ❖ Sun is the primary source of light for the mankind.

4) What is the sun?

- ❖ It is a huge ball of burning gases which emits tremendous amount of light.

5) Define luminous substances? And give examples?

- ❖ Luminous substances: are substances which produce light energy by themselves.
  - ✓ They include such substances as sun, stars, burning candle and electric bulb.

6) Define non-luminous substance? And give examples?

- ❖ Non-luminous substance: are substances which do not produce light energy by themselves.
  - ✓ They include such substances as the moon, and most of the objects.

7) Define transparent substances? And give examples?

❖ Transparent substance: are substances which allow most of light to pass through them.

✓ They include such substance as vacuum, clear air, glass and diamond. 8) Define translucent substances? And give examples?

❖ Translucent substances: are substances which partially allow light energy to pass through them.

✓ They include such substance as oiled paper, mist, and deep water.

9) Define opaque substances? And give examples?

❖ Opaque substances: are substances which do not allow light energy to pass through them.

✓ They include such substances as wood, bricks and stone.

10) Define rays of light?

❖ Rays of light is the path along which light energy travels in a given direction.

11) What is the beam of light?

❖ Beam of light is a collection of a number rays.

12) Define parallel beam?

❖ Parallel beam consists of parallel rays.

13) Define convergent beam?

❖ Convergent beam consists of rays that meet at a point.

14) Define divergent beam?

❖ Divergent beam consists of rays that come from one point.

15) Define shadow?

❖ Shadow is a dark patch formed behind an opaque body.

16) What are the kinds of shadows?

❖ There are two kinds of shadows and they are:

✓ Umbra.

✓ Penumbra. 17) Define umbra?

❖ Umbra is the region of total darkness formed behind an opaque body.

18) Define penumbra?

❖ Penumbra is a region of partial darkness formed behind an opaque body.

19) What are two types of eclipses?

❖ There are two types of eclipses and they are:

✓ Lunar eclipse

✓ Solar eclipse

20) What are the conditions caused full moon provided?

❖ The conditions caused full moon provided are:

✓ The sun, the earth and the moon should be the same straight line and same plane.

✓ Earth must be in the middle.

21) When solar eclipse formed?

❖ When the sun, the moon and the earth are in the same straight line and the same plane and the moon is in the middle solar eclipse is formed.

### FORMULA OF CHAPTER FOUR

1) Magnification:

$$❖ M = \frac{h_i}{h_o} = \frac{d_i}{d_o}$$

# THE END OF CHAPTER 4