**LIGHT**

**1.**According to the modern theory for nature of light ,the light has:

(a)wave nature only

(b)particle nature only

(c)both wave and particle (dual) nature

(d)neither particle nature nor wave nature

2.The wave length of visible light are between:

(a)300 to 0.4

(b)0.4 to 0.7

(c)0.7 to 1000

(d)0.1 cm to 30cm

3.Velocity of light is maximum in :

(a)diamond (b)water

(c)glass (d) vaccum

4.In vaccum the speed of light depends upon :

(a)frequency (b)wavelength

(c)velocity of the source of light

(d)none of these

5.If is the speed of light in vaccum and is the speed of light in given medium then the refractive index is medium is:

(a) (b)

(c) (d)none of these

6.A ray of light travelling obliquely from denser to rarer medium:

(a)bends towards to normal

(b)bends away from the normal

(c)does deviate from its path

(d)none of these

7.The laws of reflection are true for:

(a) the plane mirror only

(b)the concave mirror only

(c) the convex mirror only

(d)all reflecting surfaces

8.The focal length of a plane mirror is:

(a)positive (b)negative

(c)zero (d)infinity

9.A ray of light incident on a plane mirror at angle .If the angle between the incident and reflected rays is 80°,what is the value of.

(a)40° (b)50° (c)45° (d)55

10.If a ray of light incident on a plane mirror is such that it make an angle of 30 with the mirror, then the angle of reflection is:

(a)30 ° (b)45° (c)55° (d)60°

11.A body is standing on front of a plane mirror at a distance of 3m from it. What is the distance between the boy and his image:

(a)3m (b)6m (c)4.5 (d)none

12.The amount of light reflected depends upon:

(a) the nature of material of the object

(b) the nature of the surface

(c) the smoothness of surface

(d)all the above are correct.

13.An observer moves towards a plane mirror with a speed of 2 m/s. The speed of the image with respect to the observer is:

(a)1 m/s (b)2m/s (c)4m/s (d)8m/s

14.A plane mirror reflects a beam of light to form a real image.The incidental beam is:

(a)parallel (b)convergent (c)divergent

(d)any one of the above

15.A man of height 1.4m wishes to see his full image in a plane mirror placed at distance of 2m.The minimum height of the mirror should be :

(a)0.5m (b)0.7m (c)0.9m (d)none

16.A toy is placed between two plane mirror at angle of 60 .The number of image is:

(a)5 (b)6 (c)4 (d)3

17.An object is placed between two parallel mirrors. The number of image formed is:

(a)4 (b)6 (c)8 (d)infinity

18.Two plane mirror are placed perpendicular to each other. A ray strikes one mirror and after reflection falls on the second mirror. The ray after reflection from the second mirror will be:

(a)perpendicular to the original ray

(b)parallel to the original ray

(c)at 45 to the original ray

(d)none of these

19.Two plane mirror are inclined at a certain angle. A ray of light coming parallel to one of the mirrors is rendered parallel to the second mirror after two reflections. The inclination between the mirror is :

(a)60° (b)90° (c)45° (d)30°

20.Two plane mirror are inclined at 70 .A ray incident on one mirror at angle After reflection,falls on the second mirror and is reflected from there parallel to the first mirror

(a) 50° (b)45° (c)30° (d)55°

21.A number of image of a candle flam are seen in thick mirror:

(a)the first image is the brightest

(b)the second image is the brightest

(c)the last image is the brightest

(d)all images are equally brightest

22.The image of our face in a plane mirror :

(a)real (b)magnified

(c)diminished (d)none of these

23.The nature of image formed by a plane mirror is:

(a) virtual and erect

(b)of the same size as the object

(c)laterally inverted

(d)all the above are correct.

24.When a ray of light enters a glass slab from air:

(a)its wavelength decreases

(b)its wavelength increases

(c)its frequency increases

(d)neither its wavelength nor its frequency changes

25.When a light passes from one medium to another, the physical quantity that remains unchanged is:

(a)velocity (b)wavelength

(c) frequency (d)none

26.A monochromatic beam of light passes from a denser to a rarer medium as a result its:

(a)velocity increases

(b)velocity decreases

(c)frequency decreases

(d)wave length decreases

27.A well cut diamond appears bright because:

(a)it emits light (b)it is radioactive

(c)of total reflection (d)of dispersion

28.The refractive index of a given piece of transparent quartz is greatest for:

(a)red light (b)violet light

(c)green light (d)yellow light

29.Total internal reflection can occur when light tends to pass from:

(a) a denser to a rarer medium

(b)a rarer to a denser medium

(c)one medium to another of equal refractive index

(d)none o these

30.Mirage is observed in a desert due to the phenomenon of:

(a)interference (b)total reflection

(c) scattering (d)double refraction