**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$μm$ to 0.4$μm$

(b)0.4$μm$ to 0.7$μm$

(c)0.7 $μm$ to 1000 $μm$

(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 $V\_{c}$ is the speed of light in vaccum and $V\_{m}$ is the speed of light in given medium then the refractive index is medium is:

(a)$V\_{m}/V\_{c}$ (b)$V\_{c}/V\_{m}$

(c)$V\_{m}× V\_{c}$ (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 $θ$.If the angle between the incident and reflected rays is 80°,what is the value of$ θ$.

(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 $θ.$After reflection,falls on the second mirror and is reflected from there parallel to the first mirror $θ is:$

(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