

**OBJECTIVE TYPE QUESTIONS & ANSWERS**

**Q1. Each question is followed by four options encircle the correct option:**

**1) Focal length of the concave mirror is:**

- a. positive
- b. negative
- c. greater
- d. smaller

**2) Linear magnification:**

- a. is the ration of the distance of object to image distance from mirror.
- b. is the ratio of the distance of object and image from the focal point
- c. is the ratio of the distance of the image and object from the mirror
- d. is the ratio of the distance of image Iron object and the distance of object from the mirror

**3) Focal length of a concave lens is:**

- a. positive
- b. negative
- c. greater
- d. smaller

**4) If the image is virtual, then its distance from lens is taken:**

- a. positive
- b. negative
- c. double
- d. half

**5) The ratio of the height of the image to an object is called:**

- a. imagination
- b. magnification
- c. mirage
- d. mirror

**6) Diameter of a spherical mirror is called:**

- a. radius of curvature
- b. center of curvature
- c. aperture
- d. focal length

**7) The focal length of a spherical mirror is:**

- a. R
- b.  $2/R$
- c.  $2R$
- d.  $\sqrt{R/2}$

**8) The principal focus of a concave mirror is rear because:**

- a. the reflected rays actually pass through it
- b. the refracted rays actually pass through it
- c. prisms has been placed before principal focus
- d. the reflected rays do not pass through it.

- a. radius  
c. principal axis
- b. focal length  
d. virtual focus

10) If the outer curved surface of a mirror is reflecting, then it's called:

- a. concave mirror  
c. plane mirror
- b. spherical mirror  
d. convex

11) Select the 'strong' statement:

- a. image formed by convex mirror is always virtual  
b. distance of virtual image is taken as negative  
c. distance of virtual image is taken as positive  
d. focal length of a convex mirror is taken as negative

12) Which of the equation for ... ramification is correct?

- a.  $q/p$   
c.  $1/p$
- b.  $p/q$   
d.  $q/p$

13) Which is the use of convex mirror?

- a. used by doctors for examination of eyes etc..  
b. used for shaving and make up  
c. used in search light  
d. used in motor cycle or automobiles

14) Which is the refractive index of diamond?

- a. 1000  
c. 1.33
- b. 1.003  
d. 2.42

15) Which ... seems Snell's law?

- a.  $n = \frac{\sin i}{\sin r}$   
b.  $n_1 \sin r = n_2 \sin i$   
c.  $n = \frac{1}{q}$   
d.  $n = v \times \lambda$

16) Speed of light in glass is:

- a.  $3 \times 10^8 \text{ ms}^{-1}$   
b.  $2 \times 10^8 \text{ ms}^{-1}$   
c.  $3 \times 10^9 \text{ ms}^{-1}$   
d.  $4 \times 10^8 \text{ ms}^{-1}$

17) The angle of incidence in the denser medium for which the corresponding angle of refraction is  $90^\circ$  in the rare medium is called:

- a. angle of deviation  
c. angle of reflection
- b. critical angle  
d. angle of refraction

18) The critical angle for water is:

c.  $59^\circ$ d.  $51^\circ$ 

19) In the equation:  $n = \frac{\sin\left(\frac{A + D_m}{2}\right)}{\sin\left(\frac{A}{2}\right)}$  n is called:

- a. no. of moles of diamond
- b. no. of atoms of diamonds
- c. refractive index of diamond
- d. angle of minimum deviation

20) In a totally reflecting prism one angle must be of:

- a.  $60^\circ$
- b.  $30^\circ$
- c.  $70^\circ$
- d.  $90^\circ$

21) Which of the following is used in modern telecommunication system?

- a. optical fibre
- b. endoscopes
- c. convex lenses
- d. convex mirror

22) The instrument used to view the internal structure of the human body is called:

- a. periscope
- b. binocular
- c. endoscope
- d. prism

23) Power of lens is equal to:

- a. f
- b.  $1/f$
- c.  $2f$
- d.  $3f$

24. Select the wrong statement.

- a. power of concave lens is negative
- b. power convex lens is negative
- c. focal length concave lens is negative
- d. a normal eye can see clearly up to a distance of 25 cm from the eye

25) If the radius of curvature of spherical mirror is 26 cm, its focal length will be:

- a. 26
- b. 13
- c. 52
- d. 2.6

26) A person suffering from long sightedness cannot see the objects distinctly:

- a. near objects
- b. distant objects
- c. at near point
- d. both (a) and (b)

27) Long sightedness is corrected by wearing glasses having:

- a. concave lens
- b. concave mirrors

28) The unit of power of lens is:

- a. watt
- b. diopter
- c. degree
- d. joules

29) If a person cannot see his distant objects distinctly then he is suffering from:

- a. short sightedness
- b. long sightedness
- c. zero sightedness
- d. none of these

30) Dioptre is the reciprocal of:

- a. focal length in cm
- b. focal length in m
- c. diameter
- d. aperture

31) A normal eye can see objects clearly whose distance from eye is about:

- a. 10 cm
- b. 20 cm
- c. 35 cm
- d. 25 cm

32) Line magnification is equal to

- a. size of image/size of object
- b. size of object/size of image
- c.  $q/p$
- d. both (a) and (c)

33) The S.I. unit of magnification is:

- a. meters
- b. centimeters
- c. no unit
- d. dioptre

34) The image formed by a concave lens is:

- a. virtual
- b. real
- c. virtual and erect
- d. erect

35) The lens which is thick from edges and thin from center is called:

- a. convex lens
- b. concave lens
- c. plain lens
- d. all of above

36) The formula  $1/f = 1/p + 1/q$

- a. convex lens
- b. concave lens
- c. convex mirror
- d. all of above

37) The rainbow which has red color on its outer edge and violet color on its inner edge is called:

- a. primary
- b. secondary
- c. both (a) and (b)
- d. all of the above

38) Violet, blue, green, yellow and red represent:

- a. Primary rainbow
- b. secondary rainbow
- c. both (a) and (b)
- d. all of the above

**39) Gastroscope is an instrument to view the:**

- a. heart
- b. lungs
- c. stomach
- d. liver

**40) Optical fibres are used in the field of:**

- a. telecommunication
- b. medical surgery
- c. engineering
- d. all of these

**41) The optical fibre works on the principal of:**

- a. total internal reflection
- b. reflection of light
- c. interference
- d. diffraction

**42) The refraction of waves depends on their:**

- a. frequency
- b. wavelength
- c. amplitude
- d. density

**43) The angle of incidence for which corresponding angle of refraction is  $90^\circ$  is called:**

- a. total internal reflection
- b. angle of prism
- c. critical angle
- d. refracted angle

**44) In total internal reflection, light must be coming from:**

- a. rare medium
- b. denser medium
- c. denser to rare medium
- d. rare to denser medium

**45) The angle of prism  $\angle A$  is equal to:**

- a.  $45^\circ$
- b.  $30^\circ$
- c.  $90^\circ$
- d.  $60^\circ$

**46) Refraction of water is also given by:**

- a. apparent depth/actual depth
- b. real depth/ apparent depth
- c. real depth x apparent depth
- d. none of these

**47) The refractive index of water is:**

- a. 1.33
- b. 1.5
- c. 1.47
- d. 2.42



