EXERCISE # 1

A Very Short Answer Type Questions

Q.1 What do you understand by the rectilinear propagation of light ?

Q.2 What is the relation between the incident ray, the reflected ray and the surface of a plane mirror ?

Q.3 Write three properties of the image formed by a plane mirror

Q.4 An object is placed beyond the focus of a concave mirror. What is the nature of the image–real or virtual erect or inverted

Q.5 An object is placed beyond the focus of a convex lens. What is the nature of the image–real or virtual, erect or inverted ?

Q.6 You have a concave mirror. Where will you place an object to see an erect and magnified image ?

Q.7 You have a convex lens. Where will you place an object to see an erect and magnified image?

Q.8 Mention two uses of a concave mirror

Q.9 State two uses of a convex lens.

Q.10 What is white light ?

B Short Answer Type Questions

Q.11 Why is the image formed by a pinhole inverted ?

Q.12 What happens when parallel rays of light fall on a curved reflecting surface ?

Q.13 Convex mirrors are used as rear view mirrors. Why ?

Q.14 What do you understand by the spectrum of white light ?

Q.15 How is a rainbow formed ?

Q.16 Why does a Newton's disc appear white when it is rotated ?

C Long Answer Type Questions

Q.17 What are real and virtural images ? What are the differences between them ?

Q.18 What do you understand by the focus of a lens ? How will you find the focus of the convex lens ?

Q.19 What is refraction ? Explain with an example.

D. Fill in the blanks

Q.20 An image formed by a plane mirror..... be seen on a screen.

Q.21 A ..... image can be formed on a screen.

Q.22 A convex mirror is one in which the reflecting surface bulges .....

Q.23 A magnifying glass is a ..... lens.

Q.24 Parallel rays of light after passing through a ..... lens, they seem to come from a point.

EXERCISE # 2

Single Correct Answer type Questions

Q.1 Which of these form virtual images only ?
(A) Concave mirror (B) Convex mirror
(C) Convex lens (D) None of these

Q.2 A drop of water on a leaf forms a magnified image of the veins because of-
(A) refraction
(B) reflection
(C) radiation
(D) rectilinear propagation

Q.3 If we mix lights of the colours of the rainbow, we will get
(A) pink light (B) brown light
(C) colourless light (D) black light

Q.4 If you bring a faraway object towards the focus of convex lens, the size of the image will-
(A) increase (B) decrease
(C) double (D) remain the same

Q.5 Which of these are due to the rectilinear propagation of light ?
(A) rainbow
(B) inverted image in a pinhole camera
(C) shadow
(D) reflection

Q.6 Light causes the sensation of-
(A) Vision
(B) Light
(C) Both (A) and (B)
(D) None

Q.7 Light is-
(A) an electromagnetic radiation
(B) a longitudinal wave
(C) massless
(D) all of the above

Q.8 Which of the following is a natural luminous source of light ?
(A) sun (B) wood
(C) electric lamp (D) torch

Q.9 Light shows -
(A) random propagation
(B) curvilinear propagation
(C) rectilinear propagation
(D) None of these

Q.10 Which of the following is a reflector of light ?
(A) Sun (B) Star
(C) Filament (D) Moon

Q.11 Wood is an example of-
(A) translucent (B) Transparent
(C) Polymer (D) Opaque

Q.12 If the angle of incidence is 50°, then calculate the angle between the incident ray and the reflected ray-
(A) 50° (B) 80°
(C) 130° (D) 100°

Q.13 Which of the following statement is true ?
(A) The angle of incidence is twice the angle of reflection
(B) The incident ray, the reflected ray and the normal drawn at the same point of incidence lie in the same plane
(C) Some types of virtual images can be caught on the screen.
(D) A plane mirror forms a real image

Q.14 Two plane mirrors are inclined at a angle 60°, the number of images of an object which is placed between mirror will be-
(A) 4 (B) 3
(C) 5 (D) 6

Q.15 Plane mirror are arranged parallel to each other to get-
(A) A single image
(B) Two images
(C) A large number of reflected images
(D) No image

Q.16 When an object is moved towards the plane mirror-
(A) Image moves away from the object
(B) Size of the image increases

(C) Image moves closer to the object
(D) Size of the image decrease

Q.17 David is observing his image in a plane mirror. The distance between the mirror and his image is 5m. If he moves 1m towards the mirror, then the distance between David and his image will be-
(A) 3 m (B) 5 m
(C) 6 m (D) 8 m

Q.18 The rear view mirror of a car is a plane mirror. A driver is reversing his car at a speed of
2 m/s. The driver sees in his rear view mirror the image of truck parked behind his car. The speed at which the image of the truck appears to approach the driver will be-
(A) 1 m/s (B) 2 m/s
(C) 4 m/s (D) 8 m/s

Q.19 For a concave mirror when the object is placed between the pole and the focus then the image formed will be-
(A) Virtual (B) Real
(C) Inverted (D) Diminished

Q.20 Mirror used to form magnified image is
(A) Concave mirror (B) Convex mirror
(C) Plane mirror (D) None of these

Q.21 A convex mirror always produces-
(A) an erect, real image of diminished size
(B) an erect, real image of enlarged size
(C) a virtual, erect image of enlarged size
(D) an erect, virtual image of diminished size

Q.22 A reflecting surface is curved inwards. Now the mirror formed is-
(A) concave (B) plane
(C) convex (D) none of these

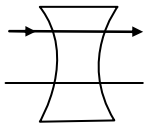
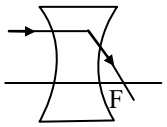
Q.23 The phenomenon of the change in the path of the light as it passes from one optical medium to another is called-
(A) Reflection of the light
(B) Refraction of light
(C) Dispersion of light
(D) Both (A) and (B)

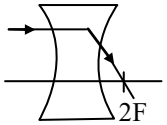
Q.24 Arrange the optical mediums in ascending order according to optically denser.
(A) Air, water glass (B) Water, glass, air
(C) Glass, water, air (D) Glass, air, water

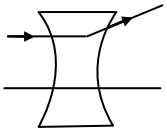
Q.25 We put glass piece on a printed page image of prints on the page has same size. The piece is-
(A) Convex lens (B) Glass slab
(C) Concave lens (D) Prism

Q.26 What happens, when a ray incident at the optical centre ?
(A) It passes with deviation of 30° angle through the lens
(B) It passes undeviated through the lens
(C) It passes with deviation of 45° angle through the lens
(D) None of these

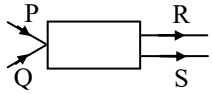
Q.27 If the lower part of a convex lens is blackened then the image formed will be
(A) incomplete
(B) complete
(C) of lower intensity
(D) both (B) and (C)

Q.28 Which of the following diagrams correctly represent the passage of a ray of light through a concave lens ?
(A) 
(B) 

(C) 

(D) 

Q.29 White light spectrum contains-
(A) 5 colours (B) 7 colours
(C) 6 colours (D) No colour

Q.30 The diagram below shows two incident rays P and Q which emerge as parallel rays R and S. The appropriate device used in the box A is-


(A) convex lens (B) concave lens
(C) prism (D) concave mirror

ANSWER KEY

EXERCISE-2

Ques.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	B	A	C	A	C	A	A	A	C	D	D	D	B	C	C
Ques.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	C	D	B	A	A	D	A	B	A	B	B	D	D	B	B