TENDER HEART HIGH SCHOOL; Sec-33B, CHD

CLASS- VIII

Ch-7 (Reflection of light)

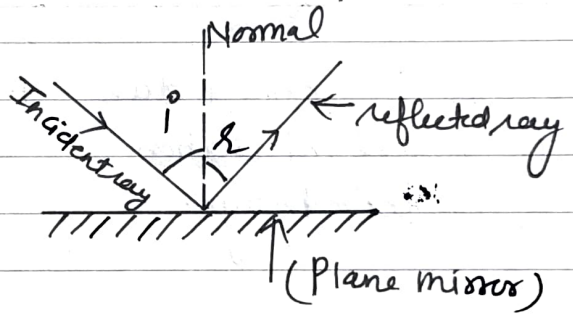
Continue 7(A)

Ans (f) **Plane mirror** :→ It is a highly polished and silvered surface which reflects almost the entire light falling on it.

7Q :→ State two laws of reflection of light ?

Ans :- ① It states that angle of incidence is always equal to the angle of reflection i.e $\angle i = \angle r$

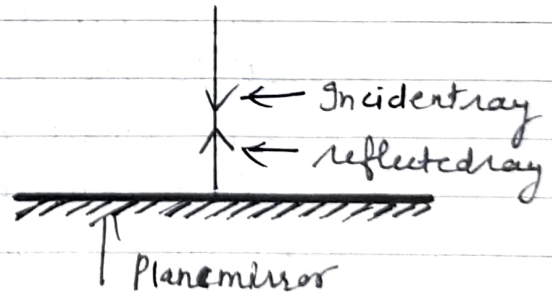
② The incident ray, reflected ray and the normal all lie in the same plane.



8Q :- Show the reflection of a ray of light, incident normally on a plane mirror.

Ans Along normal Incidence ;

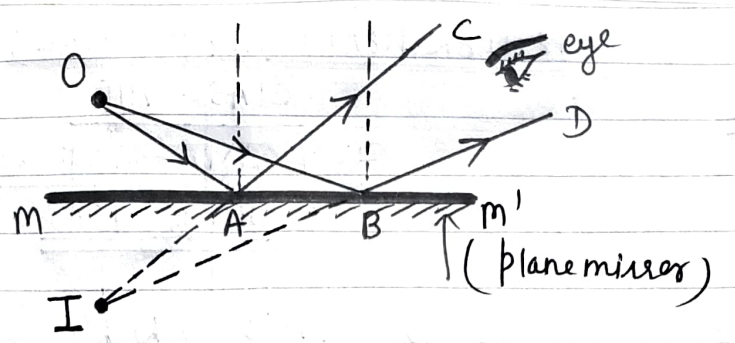
$\angle i = \angle r = 0°$



9Q :→ Draw a diagram for the image of a point Object formed by a plane mirror.

Ans

point Object :→ The object whose dimensions are almost negligible.



I — point image of point Object O.
Image is virtual because reflected rays do not actually meet.

10Q :→ Differentiate b/w a Real image and a Virtual Image.
(* Write three point of differences)

Ans :—

(Real Image)	(Virtual Image)
1. It is formed due to actual intersection of reflected rays.	1. It is formed when reflected rays produced backwards. (reflected rays appear to meet)
2. It can be obtained on screen.	2. It cannot be obtained on screen.
3. It is inverted with respect to the Object. for e.g; Concave mirror always form real image. or image formed on the big screens of Cinemas	3. It is erect (upright) with respect to the Object. for e.g plane mirrors and Convex mirrors always form virtual images

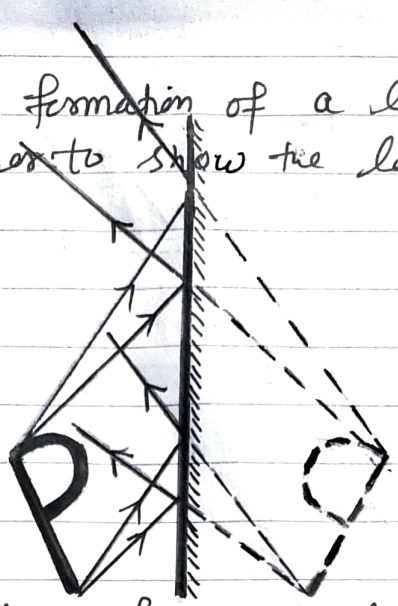
11Q :→ Define Lateral inversion?

Ans

It is the interchange of the left and right sides in the image of an Object in a plane mirror.

12Q Draw the image formation of a letter 'P' in a plane mirror to show the lateral inversion.

Ans



(Lateral Inversion)

13Q :→ Write the letters for which lateral inversion is not noticable and why is it so?

Ans :- The letters are A, H, I, M, O, T, U, V, W, X, Y. The images of these letters remains unchanged because they have a symmetry about a vertical line.

14Q :→ (a) Write the Characteristics of the image formed by a plane mirror?

(b) How is the position of image related to the position of the object?

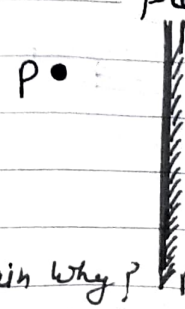
Ans (a) Characteristics :→ (1) Erect (upright) (2) Virtual (3) Same size as that of object (4) Laterally inverted

(b) The image is situated at the same perpendicular distance behind the mirror as the object is in front of it.

19Q :→ The diagram shows the point object P in front of a plane mirror MM_1.

(a) Complete the diagram by taking two rays from point P to show the formation of image.

(b) Is the image formed real or virtual. Explain why?



Ans

(a)

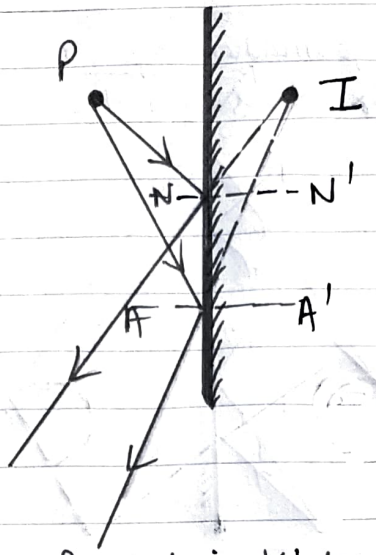


Image is formed at I

(b) Image formed is virtual because reflected rays appear to meet when they are produced backwards

16 Q Why the letters on the front of the ambulance (ƎɔИAJUBMA are written reversed?

Ans It is so because, it can be easily read in the rear-view mirrors of the other vehicles. As rear-view mirrors provide laterally inverted image of the letters as 'AMBULANCE', therefore drivers of the other vehicles give a way to the ambulance first.

17 Q:- If an object is shifted by a distance 'd' towards the mirror. then tell how much distance the image will be shifted from the mirror? If mirror is a plane mirror?

Ans The image will also be shifted through the same distance i.e d towards the mirror.

18 Q:-

← to be Continue →