



# PHYSICS

## BOOKS - NAVNEET SCIENCE (HINGLISH)

### QUESTIONS BASED ON DIAGRAMS

#### Effects Of Electric Current

1. Draw a neat labelled diagram to show the experimental arrangement used to study the

magnetic field produced around a straight current-carrying conductor.



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2. Draw a neat labelled diagram to show the experimental arrangement used to study the magnetic field produced by a current through a loop of conducting wire.



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## Heat

1. Draw a neat labelled diagram of Hope's apparatus.



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## Refraction Of Light

1. With a neat labeled diagram, prove that if the angle of incidence and angle of emergence

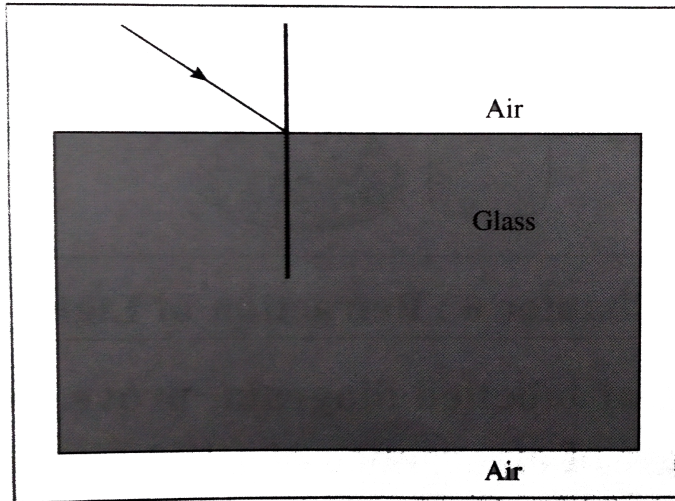
of a light ray falling on a glass slab are  $i$  and  $e$  respectively, then  $i=e$ .



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2. Complete the following ray diagram to show refraction of light through a glass slab and label the incident ray, refracted ray and

emergent ray.



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3. With a neat labelled diagram, explain the terms total internal reflection and critical angle.



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4. With a neat labelled diagram, explain how a rainbow is formed.



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5. Prove the following statement : A rainbow is the combined effect (an exhibition) of the refraction, dispersion and total internal reflection of light (taken together).



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## Lenses

1. Draw neat and well labelled ray diagrams for image formation by a convex lens when an object is at infinity



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2. Draw neat and well labelled ray diagrams for image formation by a convex lens when an object is beyond  $2F_1$

Also state the position , nature and size of the image relative to that of the object.



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3. Draw neat and well labelled ray diagrams for image formation by a convex lens when an



object is

at  $2F_1$



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**4.** Draw neat and well labelled ray diagrams for image formation by a convex lens when an object is

at focus  $F_1$



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5. Draw neat and well labelled ray diagrams for image formation by a convex lens when an object is

between focus  $F_1$  and optical centre O. Also, in each case, state the position, nature and size of the image relative to that of the object.



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6. Draw ray diagrams showing the image formation by a concave lens when an object is

placed

(a) between focus and twice the focal length of the lens

(b) beyond twice the focal length of the lens



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7. Draw a neat labelled diagram to show the structure of the human eye.



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1. With a neat labelled diagram describe Wilfley table method.



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2. Draw a neat and labelled diagram

Hydraulic separation



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3. Draw a neat and labelled diagram

Magnetic separation method



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4. With neat and labelled diagram, explain froth floatation method.



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**Carbon Compounds**

1. Draw the Lewis dot structure of hydrogen molecule .



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2. Draw the electron dot structure and line structure of oxygen molecule



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3. Draw the electron dot structure and line structure of methane molecule



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## Space Missions

1. Draw a neat labelled diagram : Structure of PSLV made by ISRO.



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## Assignment

1. In the case of a convex lens, show the path of the refraction ray when the incident ray of light (1) is parallel to the principal axis of the lens (2) passes through the focus of the lens (3) passes through the optical centre of the lens.



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