

# Girls' High School & College, Prayagraj

Assignment

Session 2020-2021

Class - IX A B C D E F

Subject-Physics

## Instructions: -

1. Parents are expected to ensure that the student writes all experiments in Guided Physics Practical Work-Book (D N publications OR Nova publications).
2. Observation and reading will be done, when the school re-opens.
3. Each experiment should start from a new page.
4. Well labelled diagrams to be drawn on the left page only.

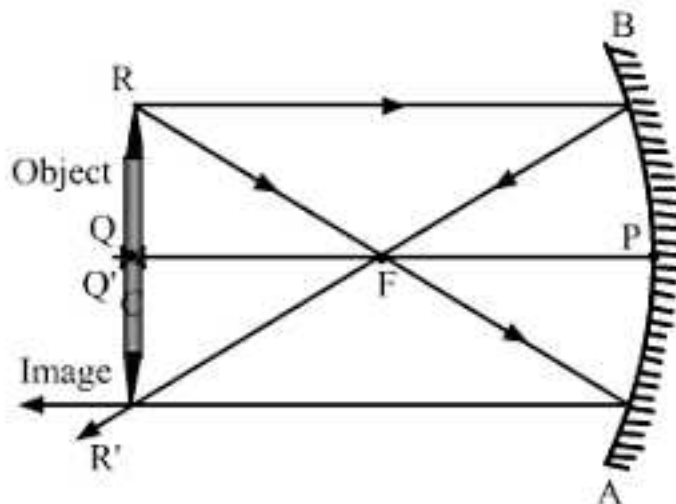
## EXPERIMENT NO.8

**AIM:** - To determine the focal length of given concave mirror.

**APPARATUS REQUIRED:-** A concave mirror, a metre scale, a pin and a pin holder, a mirror holder.

**THEORY:** - When the object is placed at the centre of curvature in front of concave mirror, its image is formed at the same place and of the same size. In this position (sharpest image position), the distance between the object and mirror will be equal to the radius of curvature (  $R$  ) and half of radius of curvature will be focal length (  $f$  ) of concave mirror.

$$f = R/2$$



**OBSERVATIONS:-**

Least count of the metre scale =..... cm

S. No.	Position of pin X (in cm)	Position of mirror Y (in cm)	Radius of curvature $R=(Y - X)$ cm	Focal length $F=(R/2)$ cm
1.				
2.				
3.				
4				
<b>Mean Reading=</b>				

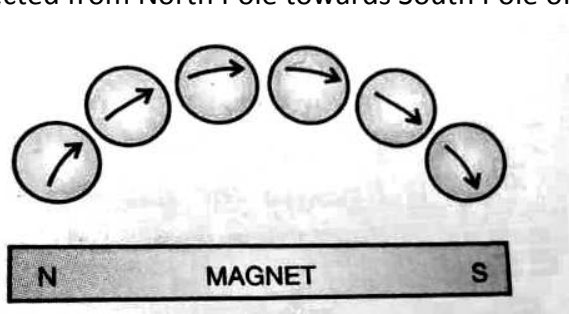
**RESULT:** - Focal length of given concave mirror = ..... cm.

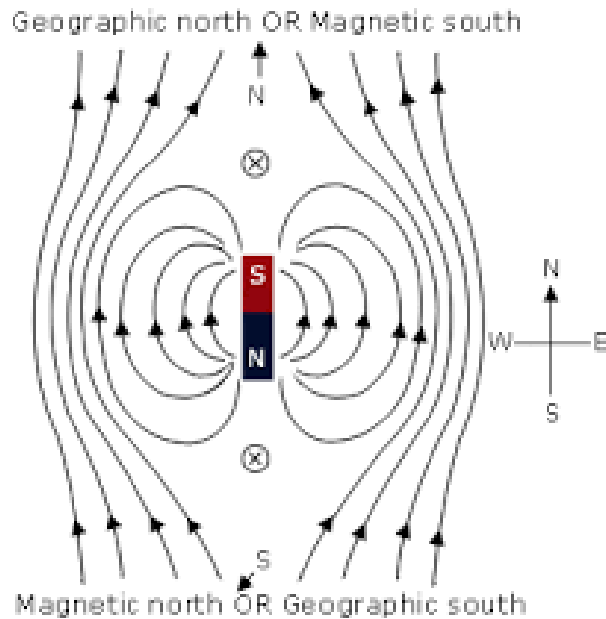
**EXPERIMENT NO.9**

**AIM:** - To draw magnetic lines of force of a bar magnet pointing North Pole of a bar magnet towards geographical South.

**APPARATUS REQUIRED:-** A drawing board, a bar magnet, a white sheet of paper, thumb pins, a compass needle and pencil.

**Theory:** - A magnetic field line is a continuous and closed curve in the magnetic field such that tangent at any point of it gives the direction of the magnetic field at that point. Outside the magnet, it is directed from North Pole towards South Pole of the magnet.





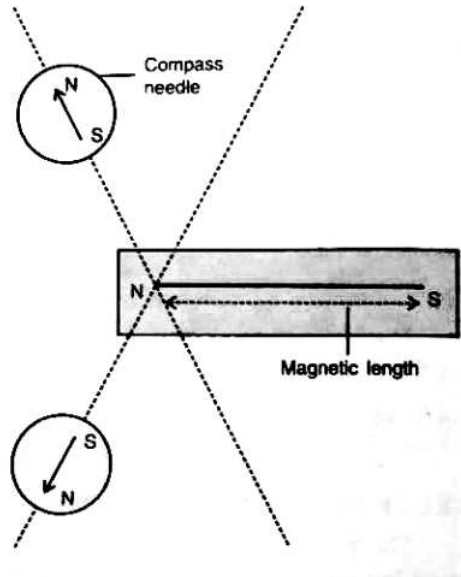
**RESULT:** - The magnetic lines of force of the given bar magnet is shown on the white sheet of paper.

#### EXPERIMENT NO.10

**AIM:-** To determine the exact position of the poles of a bar magnet hence, to find the magnetic length of the magnet.

**APPARATUS REQUIRED:-** A drawing board, a bar magnet, a white sheet of paper, thumb pins, a compass needle and pencil.

**Theory:-** The magnetic pole is the region at each end of a magnet where the magnetic field is the strongest. Distance between the poles of a bar magnet is called magnetic length of the magnet.



**RESULT:** - Magnetic length of the given magnet is = ..... cm.

**END**