

VIDYA BHAVAN, BALIKA VIDYAPEETH  
SHAKTI UTTHAN ASHRAM, LAKHISARAI, PIN:-811311

SUBJECT:- PHYSICS

CLASS:- XTH

DATE:14/07/XX

SUBJECT TEACHER:- MR. NEEL NIRANJAN

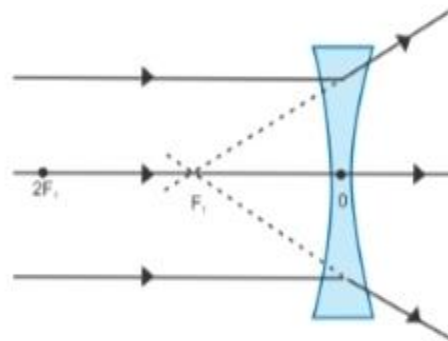
CHAPTER 5. (LIGHT- REFRACTION) (BASED ON NCERT PATTERN)

**IMAGES FORMED BY CONCAVE LENS:-**

**1) When object is placed at infinity**

Image is :

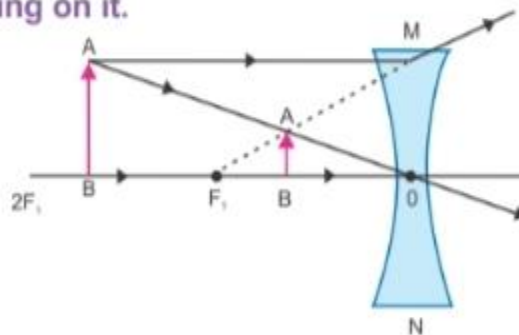
- formed at  $F_1$
- virtual and erect
- highly diminished



**2) A concave lens diverges all rays falling on it.**

Therefore for all positions, image is :

- on the same side of object
- virtual and erect
- diminished



**USES OF CONCAVE LENS:-**

- **Glasses:** Opticians use concave lenses to correct nearsightedness.
- **Cameras:** Camera manufacturers use combinations of concave and convex lenses to improve the quality of photographs.
- **Flashlights:** Concave lenses are used in flashlights to widen the beam produced by the bulb.
- **Peepholes:** Door viewers, or peepholes use one or more concave lenses device to minimize the proportions of specific objects and give a wide overview of an entire area.