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SUBJECT:- PHYSICS CLASS:- XTH DATE:22/11/XX

**SUBJECT TEACHER:- MR. NEEL NIRANJAN**

## CHAPTER 2. (LIGHT- REFLECTION) (BASED ON NCERT PATTERN)

## (REVISION)

**Question 1.** (a) Explain why, though both a plane mirror and a sheet of paper reflect light but we can see the image of our face in a plane mirror but not in a sheet of paper.
(b) The image in a plane mirror is virtual and laterally inverted. What does this statement mean ?
(c) Write all the capital letters of the alphabet which look the same in a plane mirror.
**Solution :** (a) We can see the image of our face in a plane mirror but not in a sheet of paper because images are formed by regular reflection of light and in case of a plane mirror, regular reflection takes place; while in case of a sheet of paper, diffuse reflection takes place.
(b) The image is virtual and laterally inverted means it cannot be obtained on a screen and is reversed sideways.
(c) A, H, I, M, O

**Question 2.** (a) A boy with a mouth 5 cm wide stands 2 m away from a plane mirror. Where is his image and how wide is the image of his mouth ?
(b) The boy walks towards the mirror at a speed of 1 m/s. At what speed does his image approach him ?
**Solution :** (a) The image will form 2 m behind the mirror and the width of the image of boy's mouth will be 5 cm.
(b) When the boy walks towards the mirror at a speed of 1 m/s, his image will also appear to move towards the mirror at the same speed of 1 m/s. So, the speed at which his image approach him will be 2 m/s + 2 m/s = 4 m/s

**Question 3.** Which property of light makes a pencil cast a shadow when it is held in front of a light source ?
**Solution :** Light travels in straight lines.