# REFLECTION and REFRACTION QUESTIONS

1. To reduce glare of the surroundings, the windows of some department stores, rather than being vertical, slant inward at the bottom. How does this reduce glare?

2. A person in a dark room looking through a window can clearly see a person outside in the daylight, whereas the person outside cannot see the person inside. Explain.

3. A pulse of red light and a pulse of blue light enter a glass block normal to its surface at the same time. Strictly speaking, after passing through the block, which pulse exits first?

4. If, while standing on a bank, you wish to spear a fish beneath the water surface in front of you, should you aim above, below, or directly at the observed fish to make a direct hit?

5. Two observers standing apart from one another do not see the “same” rainbow. Explain.

6. How is a rainbow similar to the halo sometimes seen around the Moon on a frosty night? How do rainbows and halos differ?

7. Does a diamond under water sparkle more or less than in air? Defend your answer.

8. In terms of focal length, how far behind the camera lens is the film located when very distant objects are being photographed?

9. The image produced by a converging lens is upside down. Our eyes have converging lenses. Does this mean the images we see are upside down on our retinas? Explain.

10. Describe the two different types of mirage and how they form.

11. What is happening in the near-sighted eye?

12. What is happening in the far-sighted eye?

13. A house has its lights on at night. A person outside can see in through the windows easily, but a person inside the house cannot see out through the windows very well. Why?