Worksheet: Light: Mirrors and Lenses

NIOS · Class 8 · Science · 8 questions · 12 marks

Name: _____ Date: _____ Score: _____ / 12

Q1. Which of the following always gives an image that is erect and diminished, whatever the distance of the object? *[1 mark]*

A) Convex mirror

B) Plane mirror

C) Concave mirror

D) Convex lens

Q2. In Activity 10.6, multiple parallel beams of light fall on a concave mirror. What happens to the reflected beams? *[1 mark]*

A) They are absorbed

B) They stay parallel

C) They converge

D) They diverge

Q3. An object is placed very close to a concave mirror. What kind of image is formed? *[1 mark]*

A) Erect and diminished

B) Erect and enlarged

C) Inverted and enlarged

D) Inverted and diminished

Q4. Assertion (A): The angle of incidence equals the angle of reflection, whatever direction the mirror is tilted. Reason (R): Both angles are measured from the normal at the specific point of incidence, and the normal always adjusts to the mirror's own orientation at that point. *[1 mark]*

A) A is false but R is true

B) A is true but R is false

C) Both A and R are true, and R is the correct explanation of A

D) Both A and R are true, but R is not the correct explanation of A

Q5. A convex lens is held close to a page of text, and the letters look larger and the right way up. What happens if the lens is now moved much farther from the same text? *[1 mark]*

A) The image becomes erect and diminished

B) The image becomes inverted, first enlarging further and then diminishing

C) The image stays erect and enlarged at every distance

D) The image disappears entirely

Q6. Explain why a spoon's inner and outer surfaces give two different kinds of image, using the chapter's own vocabulary (not focal length or ray diagrams). *[3 marks]*

Q7. Which of these is NOT stated anywhere in this chapter about spherical mirrors? *[1 mark]*

A) The laws of reflection hold for spherical mirrors as well as plane mirrors

B) Images can be classified as real or virtual depending on the position of the object relative to the focus

C) A concave mirror's reflecting surface curves inwards

D) A convex mirror always gives an erect, diminished image

Q8. A student says lenses and mirrors both 'reflect' light. Correct this statement using the chapter's own distinction. *[3 marks]*