Chapter 4: Light Energy

Worksheet 1

1. Tick the correct answer.

(i) The light ray which strikes the reflecting surface is called

(a) reflected ray (b) incident ray

(c) emergent ray (d) none of them

(ii) Which of the property/properties is/are correct about real image?

(a) It meets at one point. (b) It can be obtained on a screen.

(c) It is an inverted image. (d) All of them.

(iii) If angle of incidence is 30°, then the value of angle of reflection is

(a) 60° (b) 30° (c) 45° (d) 90°

(iv) You are standing in front of a plane mirror with a rose in your left hand. The image formed by the plane mirror will show the rose

(a) in your right hand (b) in your left hand

(c) upside down (d) in your pocket

(v) Plane mirrors are used

(a) in hair cutting saloons (b) in solar cookers

(c) in watches (d) all of them

2. Name the following.

(i) This image cannot be obtained on a screen.

(ii) The perpendicular line drawn on the reflecting surface at the point of incidence.

(iii) These mirrors are used as looking mirrors.

(iv) These colours are the combination red, blue and green colours.

(v) Bouncing back of light in a given medium.

3. Match the columns.

Column A	Column B
(i) Speed of light in air	(a) 2.25×10^8 m/s
(ii) Speed of light in water	(b) Smooth surface
(iii) Diffused reflection	(c) 2.0×10^8 m/s
(iv) Regular reflection	(d) 3×10^8 m/s
(v) Speed of light in glass	(e) Rough surface

4. Answer the following questions.

(i) Write two laws of reflection.

(ii) Which reflection is responsible for us to see our image formed by a mirror, regular or diffused?

(iii) What is obtained on mixing of seven constituent colours of sunlight?

(iv) Name the secondary colours.

(v) How is rainbow formed?

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Worksheet 2

1. Write T for true and F for false statement.

(i) We can read a book or newspaper due to diffused reflection.

(ii) The incident ray, the normal and the reflected ray all lie in the same plane.

(iii) Virtual image is an inverted image.

(iv) Curved mirrors are used in periscopes.

(v) Cyan colour is also called peacock blue colour.

2. Fill in the blanks.

(i) A transparent object appears _____ if it allows light of all the colours to pass through it.

(ii) _____ image can be obtained on screen.

(iii) The light which bounces back after reflection from the reflecting surface is called _____ ray.

(iv) Colours seen on TV arise due to formation of these three _____ colours.

(v) In _____ mirror, the image is formed as far behind the mirror as the object is placed in front it.

3. Match the columns.

Column A	**Column B**
(i) Reflection of light	(a) Primary colour
(ii) Regular reflection	(b) Secondary colour
(iii) Irregular reflection	(c) Helps us to see our image formed by a mirror
(iv) Blue	(d) Bouncing back of light
(v) Cyan	(e) Helps us to read a book

4. Answer the following questions.

(i) What is regular reflection?

(ii) Is angle of incidence equal to angle of reflection?

(iii) Mention two uses of plane mirrors.

(iv) Name the seven colours of white light.

(v) Which colour is obtained after mixing green and red colours?