

# Physics

## Class 7

### Topic: Light

#### Reinforcement Worksheet

Name: \_\_\_\_\_ Sec: \_\_\_\_\_ Date: \_\_\_\_\_

## Q.1 MULTIPLE CHOICE QUESTIONS:

1. Which factors could change the size of the shadow of an opaque object?

- a) The color of the object.
- b) How far the object is from the light source.
- c) The material the object is made from.
- d) The size of the screen.

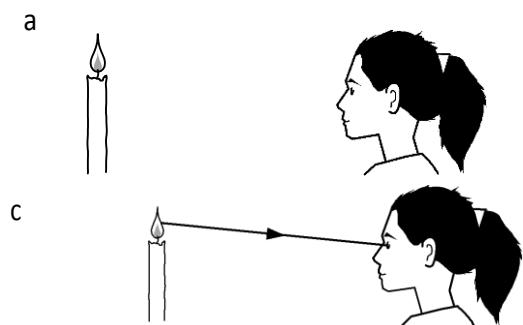
2. When a parallel beam of light is incident on a plane mirror, it is reflected back as a \_\_\_\_\_ beam.

- a) Convergent
- b) Parallel
- c) Divergent
- d) scattered

3. When light passes through the prism \_\_\_\_\_ occurs to form spectrum

- a) Reflection
- b) Incidence
- c) Refraction
- d) shadow

4. Which diagram shows how Rachel can see a candle flame?



5. If an angle between the incident ray and reflected ray is  $90^\circ$ , then the angle of reflection is

- a)  $45^\circ$
- b)  $0^\circ$
- c)  $90^\circ$
- d)  $30^\circ$

**Q2. Fill in the blanks with appropriate answers.**

- a) Light travels in a \_\_\_\_\_ line.
- b) Red, blue and green are \_\_\_\_\_ colors of light.
- c) Images formed by \_\_\_\_\_ mirrors are magnified.
- d) Red light + Green light = \_\_\_\_\_ light.
- e) Splitting of white light into its component colours is called \_\_\_\_\_.
- f) A shadow formed by an extended source of light consisting of a darker region called \_\_\_\_\_.
- g) Angle of incidence is the angle between incident ray and the \_\_\_\_\_.
- h) Light is a form of \_\_\_\_\_ which can be detected by our eyes.
- i) Speed of light in vacuum is \_\_\_\_\_.
- j) Materials that are able to transmit almost all the light are called \_\_\_\_\_.

**Q3. Write whether the statement is true or false. Rewrite the statement.**

- a) The amount of light entering the eye is determined by the size of the retina [ ]
- b) If there is more than one lens in an eye it is called compound eye. [ ]
- c) Ultraviolet light is dangerous for the eyesight. [ ]
- d) The angle of incidence is always equal to angle of refraction. [ ]
- e) People who cannot differentiate the colors are called color defected. [ ]
- f) Concave mirror gives a magnified image. [ ]

g) Convex mirror gives virtual and diminished image. [ ]

h) White light is the combination black light and white light [ ]

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**Q4. Name the phenomena of light in which:**

a) The light bends when travelling from one medium into another medium: \_\_\_\_\_.

b) The light is split into its components when pass through the prism: \_\_\_\_\_.

c) The light bounces back as it strikes a shiny and smooth surface: \_\_\_\_\_.

**Q5. Give correct reason for the following statement:**

a) Why the pupil dilates in the dark?  
\_\_\_\_\_.

b) Why the sky is blue in colour?  
\_\_\_\_\_.

c) During sunny day, a pool of water appears to lie on the road some distance ahead. Why is it called an illusion? What causes it?  
\_\_\_\_\_

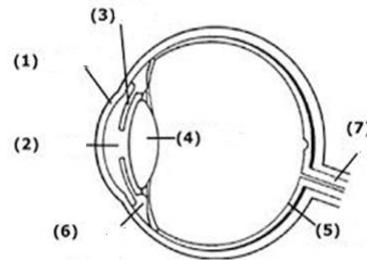
d) We can see objects when the light reflected from the objects falls upon our eyes. Why can't walls act as mirror even the light is reflected through walls and reach our eyes?  
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Q6a. Name the parts 1-7 shown in the drawing of human eye.**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_



**b) Differentiate between:**

REAL IMAGE	VIRTUAL IMAGE

CONVEX LENS	CONCAVE LENS

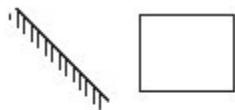
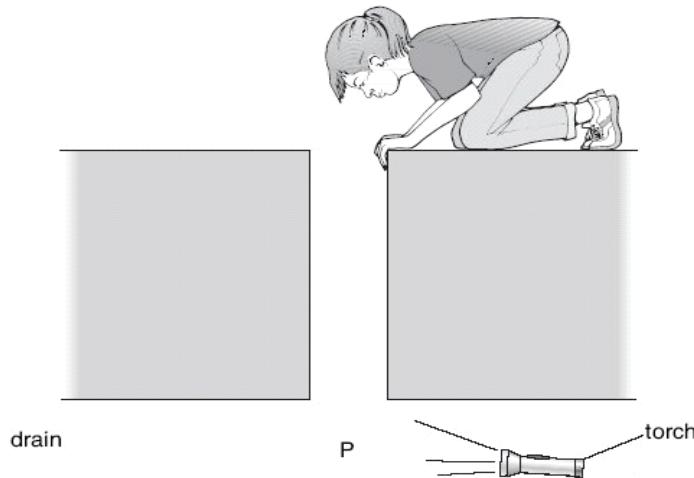
**c) Give any 3 uses of plane mirrors.**

\_\_\_\_\_

**d) What type of mirror does the inner surface of the spoon and the outer surface of the spoon act as?**

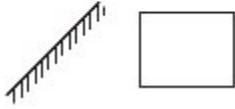
\_\_\_\_\_

**Q7. Jenny dropped her torch down a drain. The torch was still switched on but Jenny could not see it.**

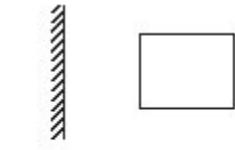


**(a) (i) Jenny lowered a mirror into the drain and placed it at position P.**

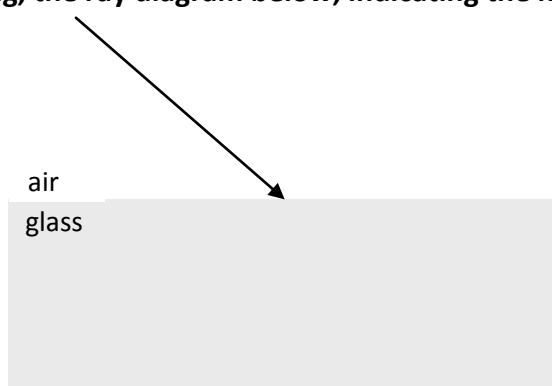
**At which angle should Jenny put the mirror to see the torch?  
Tick the correct box.**



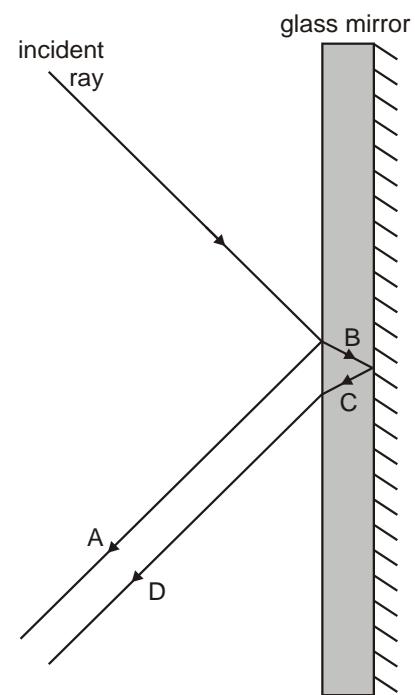
**(ii) What happens to the light from the torch when it hits the mirror?**



**(b) Complete, by sketching, the ray diagram below, indicating the normal, the refracted ray and emergent ray.**



**Q8.** The diagram shows a ray of light hitting the surface of a mirror made from thick glass. The incident ray is both reflected and refracted.



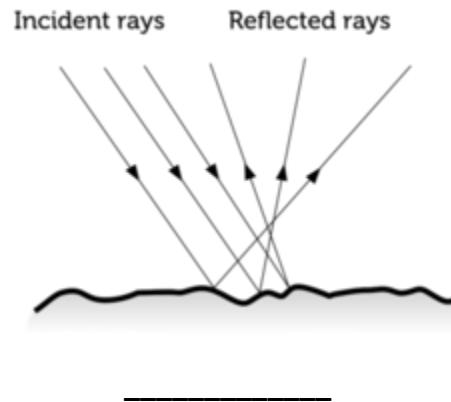
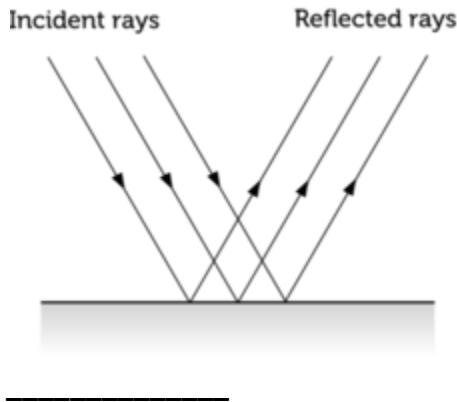
(i) Give the letters of the two reflected rays.

..... and .....

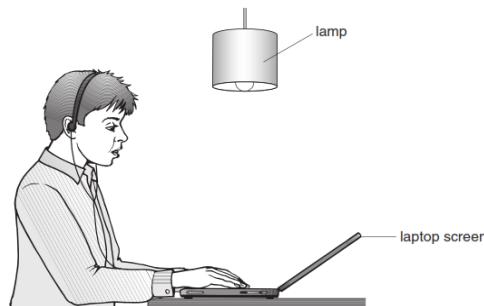
(ii) Give the letter of one refracted ray.

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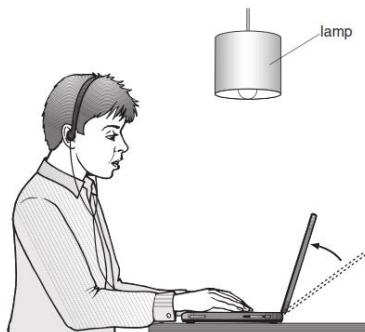
**Q9.** Identify the following types of reflection:



**Q10a.** The diagram below shows George using his laptop. Light from the lamp is reflected by the laptop screen.



(i) On the diagram above draw a ray of light to show how George sees the light from the lamp reflected by the laptop screen. Use a ruler. Draw arrows to show the direction of light.



(ii) With the laptop screen in the position shown in part (i), George sees an image of the lamp on the screen. George tilts the screen forwards as shown below.

When the screen is tilted forwards it is easier for George to see the words on the screen. What happens to the reflected ray of light when the screen is tilted?

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**b. What is dispersion of light? What causes it?**

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**c. Name:**

a) Primary colours of light. \_\_\_\_\_

b) Secondary colours of light: \_\_\_\_\_

c) Colours of white light: \_\_\_\_\_

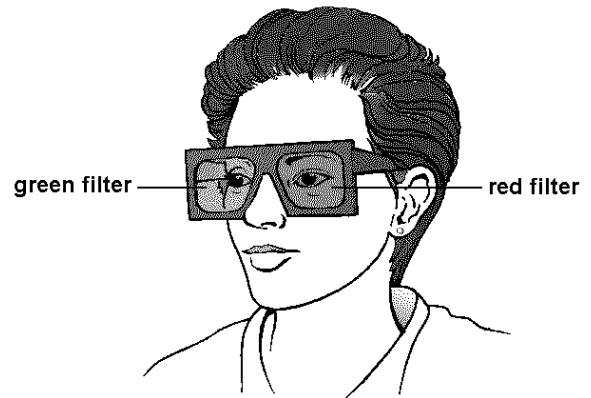
**Q11. Sunita puts on a pair of special glasses as shown below. The glasses have coloured filters in them.**

(a) Sunita looks at a lamp through the green filter. The lamp gives out white light, but appears to be green.  
Explain how this is possible.

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(b) Sunita looks at a red lamp.

(i) What colour will the lamp appear to Sunita, if she looks at it through the red filter?

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(ii) What colour will the lamp appear to Sunita, if she looks at it through the green filter?

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Explain your answer.