

Revision Test – Light & Shadow

GIVE ONE WORD ANSWERS

Q1. Can anything that travel faster than the speed of light? Yes or No

Q2. Are most objects around us luminous or non-luminous?

Q3. Are stars luminous or non-luminous?

Q4. A beam of light consists of several rays. True or False?

Q5. Which of these – a completely transparent object or a translucent object – will form a shadow?

Q6. Light is

- a) visible and also makes objects on which it falls visible.
- b) invisible but makes objects on which it falls visible.
- c) invisible but becomes visible when it falls on an object.
- d) sometimes visible and sometimes invisible but it always makes objects on which it falls visible.

Q7. The shape and size of a shadow depends on

- a) the shape and size of the object
- b) the position of the source of light
- c) the distance between the source of light and object.
- d) all of the above

Q8. Luminous bodies

- a) absorb light energy
- b) emit light energy
- c) are always a natural source
- d) are transparent

Q9. The property of light travelling in a straight line is known as

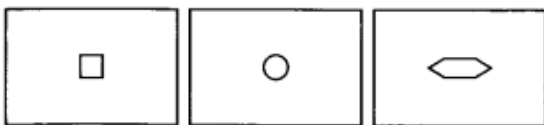
- a) reflection
- b) rectilinear propagation
- c) rays
- d) beam

Q10. Angle of reflection is

- a) the angle between the incident ray and the normal
- b) the angle between the incident ray and the reflected ray
- c) both a) and b)
- d) the angle between the reflected ray and the normal

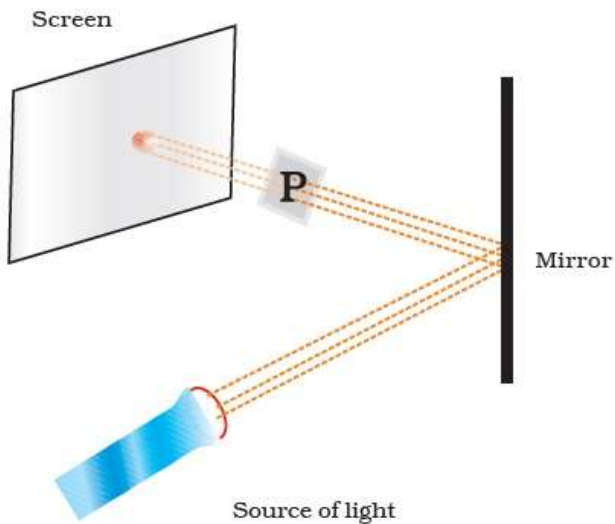
Q11. Why is it not safe to see the sun directly?

Q12. You have 3 opaque strips with very small holes of different shapes as shown in figure. If you obtain an image of the sun on a wall through these holes, will the image formed by these holes be the same or different?

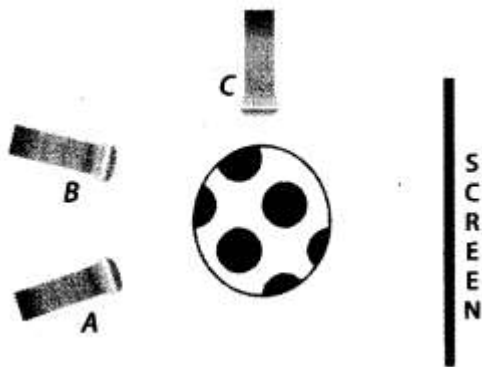


Q13. Observe the picture given in Fig. 11.6. A sheet of some material is placed at position 'P', still the patch of light is obtained on the screen. What is the type of material of this

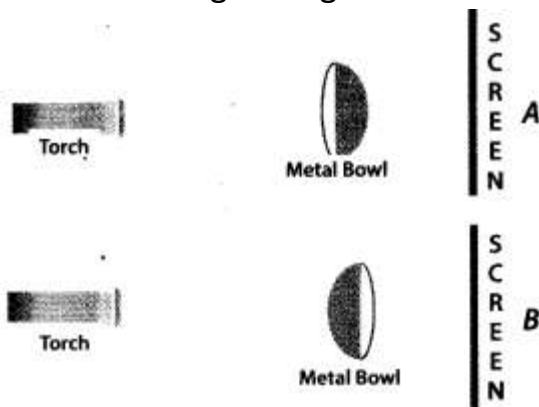
sheet?



Q14. Three torches A, B and C shown in figure are switched on one by one. The light from which of the torches will not form a shadow of the ball on the screen.



Q15. Look at the given figure.



Will there be any difference in the shadow formed on the screen in A and B ?

Q16. On a sunny day, does a bird or an aeroplane flying high in the sky cast its shadow on the ground? Under what circumstances can we see their shadow on the ground?

Q17. Is air around us always transparent? Discuss.

Q18. Three identical towels of red, blue and green colour are hanging on a clothesline in the sun. What would be the colour of shadows of these towels?

Q19. Paheli observed the shadow of a tree at 8:00 a.m., 12:00 noon and 3:00 p.m. Which of the following statements is closest to her observation about the shape and size of the shadow?

- (a) The shape of the shadow of the tree changes but the size remains the same.
- (b) The size of the shadow of the tree changes but the shape remains the same.
- (c) Both the size and shape of the shadow of the tree change.
- (d) Neither the shape nor the size of the shadow changes.

Q20. Which of the following can never form a circular shadow?

- (a) A ball
- (b) A flat disc
- (c) A shoe box
- (d) An ice cream cone

Q21. Two students while sitting across a table looked down on to its top surface. They noticed that they could see their own and each other's image. The table top is likely to be made of

- (a) unpolished wood
- (b) red stone
- (c) glass sheet
- (d) wood top covered with cloth

FILL IN THE BLANKS

1. Objects which emit their own light are known as _____.

2. _____ objects from no shadow.
3. Bouncing back of light from a surface is called _____ is light.
4. Pinhole camera is based on the principle of _____ of light.
5. Sun is a _____ object whereas moon is a _____ object.
6. Glass is _____ but plastic is _____.
7. Objects like eraser, plastic scale, pen, pencil, cloth are called _____ objects.
8. The shadow of an object is _____ in color.
9. Images are _____ from shadows.
10. Shadows are formed when an _____ object comes in the path of light.

TRUE OF FALSE

1. Glass is a transparent object.
2. Gold is a translucent metal
3. Images are also known as shadows.
4. A shining metal spoon is a plane mirror.
5. Translucent objects form a faint shadow.
6. Black thick paper is translucent.
7. The shadow of a colored object is also colored.
8. Images are very different from shadows.
9. The image of a red rose and a yellow rose is black in color.

MATCH THE FOLLOWING

- | | |
|--|--------------------------|
| a) A body that allows light to pass through it | i) Translucent material |
| b) A sheet of red cellophane | ii) Non-luminous objects |
| c) Bouncing back of light from a surface | iii) Luminous body |
| d) A body emitting its own light | iv) Reflection |
| e) Moon | v) Transparent body |

HOTS

Q1. The clock in Ritu's room in its mirror image showed as if the time is quarter past four. What is the actual time?

ANSWERS

GIVE ONE WORD ANSWERS

Q1. No

Q2. Non-luminous

Q3. Luminous

Q4. True, Ray is a single ray. Beam is a number of rays.

Q5. Translucent object.

Q6. A

Q7. D

Q8. B

Q9. B

Q10. D

Q11. Because it emits harmful and strong UV rays that can damage the retina.

Q12. Image formed will be same in all 3 cases

Q13. Transparent material

Q14. The light from torch C will not form a shadow of the ball on the screen. Torch C is parallel to the screen and light travels in straight line.

Q15. No, shadows formed on the screens A and B will be same.

Q16. Even on a sunny day, a bird or an aeroplane flying high in the sky does not cast its shadow on the ground.

We can see their shadow on the ground only if they are flying very close to the ground. In this case, ground acts as screen.

Q17. Yes it is unless there is smoke or fog.

Q18. Same color

Q19. C

Q20. C

Q21. C

FILL IN THE BLANKS

1. Luminous
2. Transparent
3. Reflection
4. Rectilinear propagation
5. Non luminous
6. Transparent, translucent
7. Opaque
8. Black
9. Different
10. opaque

TRUE OR FALSE

1. True
2. False
3. False

Image	Shadow
Image is formed due to the reflection or refraction.	Shadow is formed when the light falls on an opaque object.
Image is seen when light comes from the object after reflection or refraction enters the observer's eye.	No light enters the eye from the shadow of the object.
Image gives more information such as colour, structure, etc. about the object.	Shadow does not provide any details about the object but it gives an idea about the shape of the object.

4. False
5. True, Transparent and translucent objects form faint, fuzzy or colored shadows.
6. False
7. False
8. True
9. True

MATCH THE FOLLOWING

a) v

b) i

c) iv

d) iii

e) ii