



PHYSICS

BOOKS - S CHAND IIT JEE

FOUNDATION

LIGHT

Question Bank 4

1. Light travels as a



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2. What is the missing word?

Objects which emit light themselves are called _____ bodies.



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3. What is the missing word?

Bodies which do not emit any light are called _____ bodies.



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4. What is the missing word?

Non-luminous objects become _____ when they reflect light into our eyes.



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5. Fill in the blanks

Substance through which heat travels easily and quickly are said to be _____ of heat.



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6. The central hollow portion of vertebra is



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7. An image that cannot be obtained on a screen is called _____ .



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8. What is the missing word?

Substances that continue to emit light even

after the source of light illuminating them is withdrawn are known as. _____ substances.



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9. What is the missing word?

Substances that stop giving off light once the source of light illuminating them is removed, are called _____ substances.



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10. Match the following

- | | |
|-------------------|--------------------------------|
| (i) Stars | (a) Translucent |
| (ii) Human beings | (b) Transparent |
| (iii) Air | (c) Opaque |
| (iv) Torch light | (d) Natural sources of light |
| (v) Frosted glass | (e) Artificial source of light |



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11. Which of the following is a luminous body?

A. earth

B. moon

C. sun

D. none of these

Answer:



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12. Objects which allow some light to pass through them but through which objects cannot be seen are called

A. opaque

B. transparent

C. translucent

D. none of these

Answer:



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13. Which of the following is a non-luminous body?

A. fire

B. sun

C. stars

D. earth

Answer:



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14. Which of the following is a luminous body?

A. Fire

B. Earth

C. Moon

D. Tree

Answer:



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15. The path along which light travels in a homogeneous medium is called the

A. beam of light

B. ray of light

C. pencil of light

D. none of these

Answer:



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16. A thin layer of water is transparent but a very thick layer of water is

A. translucent

B. opaque

C. most transparent

D. none of these

Answer:



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17. State whether the following statements are true or false:

A translucent object stops light only partially.



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18. State whether the following statements are true or false:

Birds do not cast shadows when they fly at a great height.



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19. State whether the following statements are true or false:

The moon is a luminous object.



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20. State whether the following statements are true or false:

A red object casts a red shadow.



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21. State whether the following statements are true or false:

The colour of the shadow is black if the colour of the object is white



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22. State whether the following statements are true or false:

An opaque object stops the light completely therefore, it casts a dark shadow



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23. State whether the following statements are true or false:

Penumbra is darker than umbra



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24. Name the following:

The eclipse that takes place when moon comes between sun and earth.



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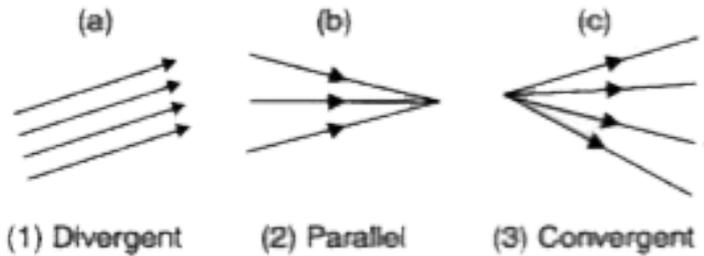
25. Name the following:

The eclipse that takes place when earth comes between sun and moon



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26. Match the headers with the figures:



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27. Light from the Sun reaches us in nearly

A. 7 minutes

B. 8.3 minutes

C. 8 minutes

D. 7.9 minutes

Answer:

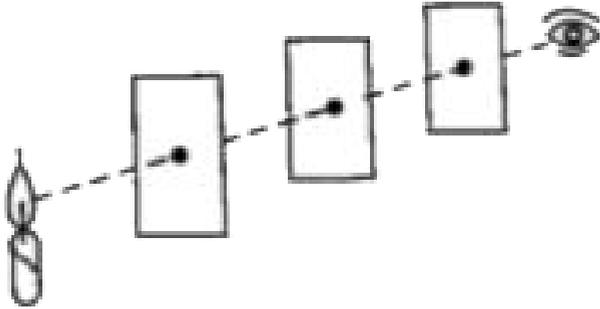


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28. What is the missing word?

This experiment demonstrates that light

travels in -lines



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29. You can see through a car window because the window is

A. opaque

B. transparent

C. translucent

D. None of these

Answer:



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30. The distance from Earth to the moon is 3,84,000 km. Calculate the time it takes for light to travel that distance.



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31. Which of the following bodies allows only a part of the light to pass through it?

A. Oiled paper

B. Brick

C. Wood

D. Air

Answer:



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32. Rearrange the boxes given below to make a sentence that helps us understand opaque objects.

OWS AKE OPAQ UE O BJEC T SM
SHAD



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33. Can you think of creating a shape that would give a circular shadow if held in one way and a rectangular shadow if held in another way?



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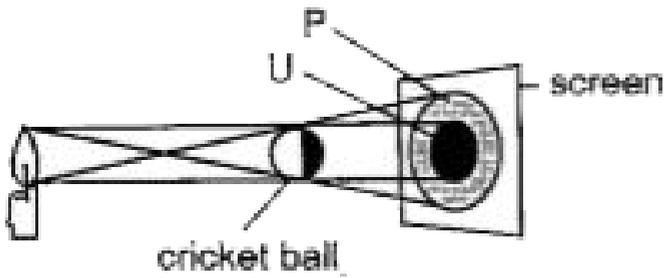
34. In a completely dark room if you hold up a mirror in front of you, will you see a reflection of yourself in the mirror ?



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35. What is the missing label at

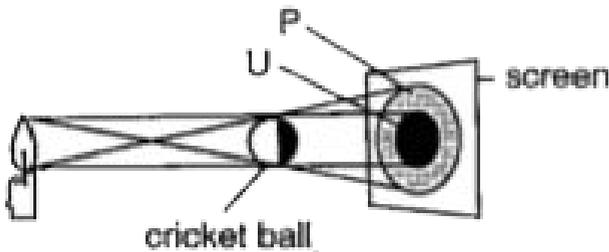
P,



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36. What is the missing label at

U



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37. A substance which radiates light when heated to a high temperature is said to be

A. luminescent

B. incandescent

C. fluorescent

D. phosphorescent

Answer:



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38. The speed of light with the rise in the temperature of the medium

A. increases

B. decreases

C. remains unaltered

D. drops suddenly

Answer: C



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39. Air is not visible because it

A. is nearly a perfectly transparent substance

B. neither absorbs nor reflects light

C. transmits whole light

D. all the above are correct

Answer: D



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40. We are able to see things because

A. the light emitted by the objects reaches
our eyes

B. the light emitted by our eyes falls on the
objects

C. the light scattered by the objects
reaches our eyes

D. the rays of sun fall on the objects

Answer: C



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41. Lunar cclipse takes place on

A. new moon

B. full moon

C. 22nd of the month

D. 8th of the month

Answer: B



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42. To an astronaut in a spaceship, the sky appears

A. white

B. black

C. deep blue

D. crimson

Answer: B



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43. Circular shadow of Earth on the Moon occurs during

A. lunar eclipse

B. solar eclipse

C. sunrise

D. sunset

Answer: A



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44. If there were no atmosphere, what would be the colour of the Earth?

A. red

B. blue

C. black

D. white

Answer: C



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45. The solar eclipse achieves totality only in limited geographical region because

A. The trajectories of the earth around the sun and the moon around the earth are not perfect circles

B. The size of the shadow of moon on the earth is small compared to the cross-section of the earth

C. The earth is not a smooth flat surface, but has elevations and depressions

D. none of these

Answer: B



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46. Who measured the speed of light first

A. Galileo

B. Newton

C. Romer

D. Einstein

Answer: C



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47. The amount of light reflected depends upon

- A. the colour of material of the object
- B. the nature of the surface
- C. the smoothness of the surface
- D. all the above

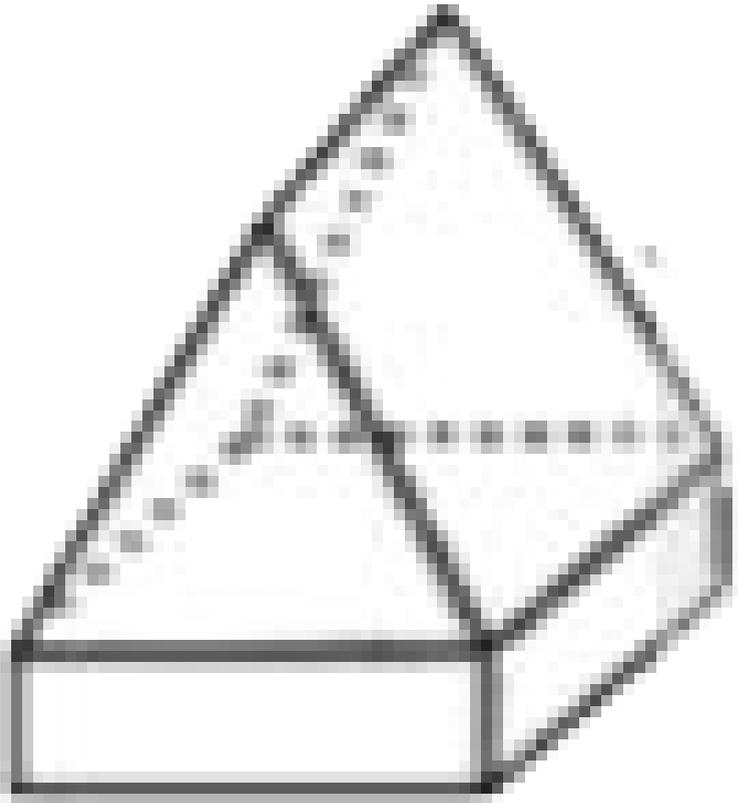
Answer: D



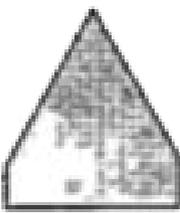
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48. The object shown at the right is taken out in the sun and rotated. The different shadows formed are observed. Mark the picture which

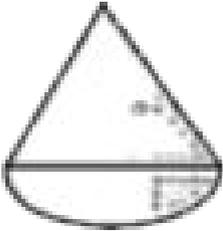
cannot be the shadow of this object.



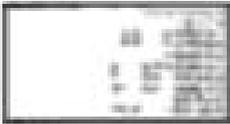
A. 



B.



C.



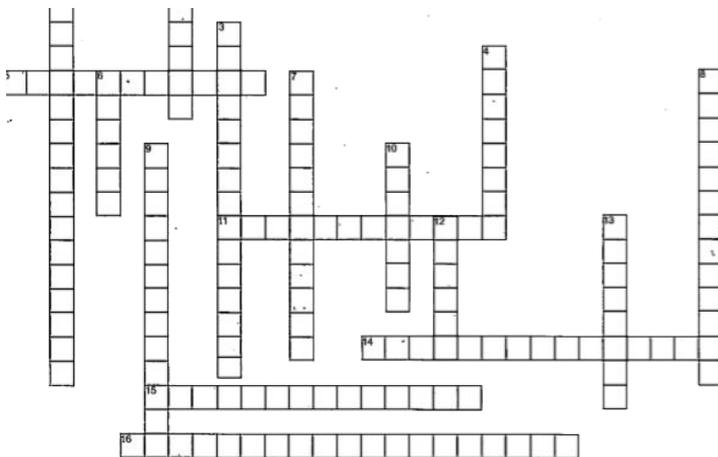
D.

Answer:



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49. Solve the following crossword with the help of the given clues.



ACROSS

5. Transmitting light so as to be seen through clearly.
11. Objects that do not emit light.
14. Rays of light that diverge in different directions.
15. Substances that continue to emit light even after withdrawal of the source of light.
16. Throwing back of a light wave when it strikes an obstacle.

DOWN

1. Rays of light coming out from the sun.
2. The central and dark portion of a shadow.
3. The light rays that converge at a point.
4. Light emitting objects.
6. Formed when the path of the light is blocked by an opaque object.
7. Path along which light energy travels.
8. Eclipse of the moon.
9. Eclipse of the sun.
10. The blocking of light from one heavenly body by another.
12. Objects that do not allow light to pass through.
13. A region of partial shadow surrounding the umbra.



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Self Assessment Sheet 4

1. Answer true or false

Penumbra is a region of partial darkness.



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2. Answer true or false

Shadows are long when sun is overhead.



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3. Answer true or false

An wooden plank is an opaque object



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4. Answer true or false

Umbra is a region of complete darkness.



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5. Answer true or false

Lunar eclipse occurs on new moon



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6. Answer true or false

Objects which emit their own light are called non-luminous objects.



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7. Answer true or false

No shadow is formed when light passes through an object



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8. Match correctly:

Column A

1. Moon comes between sun and earth
2. Stars
3. Allows light to pass through
4. Earth
5. Candle
6. Sun

Column B

- a. non luminous
- b. natural source of light
- c. luminous
- d. artificial source of light
- e. solar eclipse
- f. transparent



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9. Give reasons for the following:

If there is a glass door and is closed then you may not be able to see it and get hurt if you try to pass through it.



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10. Give reasons for the following:

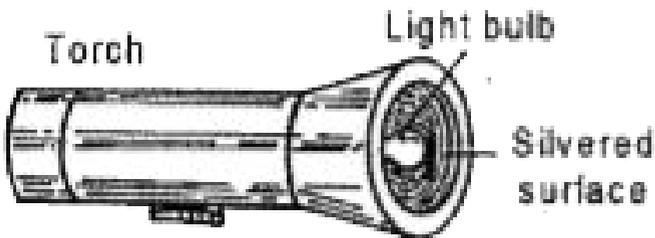
Although the moon is non-luminous, it appears bright and brings light on earth



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11. Give reasons for the following:

Silvered surfaces are used behind light bulbs in torches.



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12. Give reasons for the following:

If you pass under a tree covered with large

number of leaves, you may notice small patches of light under it

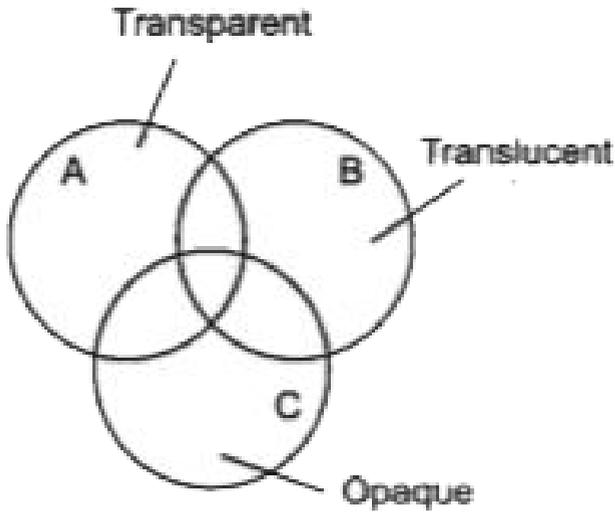


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13. Put the following objects correctly in the given Venn diagram

cardboard, air, glass, tracing paper, plastic

scale, muddy water, brick, polythene, earth.



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14. Shadows are formed by

A. light passing through an object.

B. an opaque object blocking the path of
light

C. by light reflecting from an object

D. by light deflecting from an object

Answer:



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15. As the object moves closer to a light source, the shadow

A. gets bigger

B. gets smaller

C. stays the same size

D. none of these

Answer:



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16. What kind of material is tissue paper ?

A. transparent

B. opaque

C. translucent

D. none of these

Answer:



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17. We are able to see moon because

A. it emits light

B. it absorbs light

C. it reflects sunlight

D. it is luminous

Answer:



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18. Which of the following are correct statements

An opaque object

A. allows light to pass through it

B. does not allow light to pass through it.

C. emits light.

D. reflects light falling through it.

Answer:



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19. It is not possible to see a burning candle by using a bent pipe because

Bent pipe



Candle



- A. light gets reflected
- B. light gets absorbed
- C. light travels in straight line
- D. light gets bent along the pipe.

Answer:



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20. During shadow formation, penumbra is seen

- A. inside the umbra
- B. outside the umbra
- C. away from the umbra
- D. none of these

Answer:



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21. Shadows are

A. virtual

B. real

C. illusion

D. permanent

Answer:



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22. A camera flash is used in front of a mirror to take a photograph of the image of an object in the mirror, then:

A. the photograph of the image will be clearer

B. the photograph of the image will be brighter

C. the photograph of the object will be more beautiful

D. the photograph of the image will not show anything except white colour

Answer:



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23. A periscope in a submarine helps in viewing those objects

A. that are very far

B. that do not emit any light

C. that are below the surface of water

D. that are above the surface of water

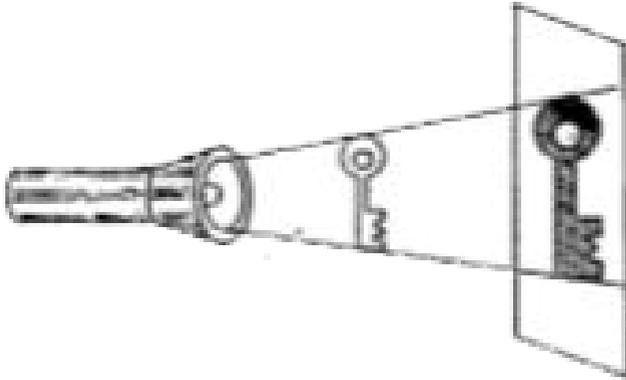
Answer:



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24. The light from torch when falls on a key, form a shadow on the screen behind the card as shown in the figure. As the torch is moved

away from the card the shadow will



- A. become smaller
- B. become larger
- C. change its shape
- D. remain unchanged

Answer:



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