

CHAPTER – 8

Light, Shadows and Reflections

Q.1

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

OWS	AKE	OPAQ	UEO	BJEC	TSM	SHAD
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Answer:

OPAQ	UEO	BJEC	TSM	AKE	SHAD	OWS
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Opaque objects make shadow

Q. 2

Classify the objects or materials given below as opaque, transparent or translucent and luminous or non-luminous:

Air, water, a piece of rock, a sheet of aluminum, a mirror, a wooden board, a sheet of polythene, a CD, smoke, a sheet of plane glass, fog, a piece of red hot iron, an umbrella, a lighted fluorescent tube, a wall, a sheet of carbon paper, the flame of a gas burner, a sheet of cardboard, a lighted torch, a sheet of cellophane, a wire mesh, kerosene stove, sun, firefly, moon.

Answer:

Classification of objects is given below:

Object	Transparent/Translucent/Opaque	Luminous/Non-luminous
Air	Transparent	Non-luminous
Water	Transparent	Non-luminous
A Piece of rock	Opaque	Non-luminous
A sheet of aluminum	Opaque	Non-luminous
Mirror	Opaque	Non-luminous
A wooden board	Opaque	Non-luminous
A sheet of polythene	Translucent	Non-luminous
CD	Opaque	Non-luminous
Smoke	Translucent	Non-luminous
Sheet of plane glass	Transparent	Non-luminous
Fog	Translucent	Non-luminous
Piece of red hot iron	Opaque	Luminous
Umbrella	Opaque	Non-luminous
Lighted fluorescent tube	Opaque	Luminous
Wall	Opaque	Non-luminous
Sheet of carbon paper	Opaque	Non-luminous
Flame of a gas burner	Translucent	Luminous
Sheet of cardboard	Opaque	Non-luminous
Lighted torch	Opaque	Luminous
Sheet of cellophane	Transparent	Non-luminous
Wire mesh	Translucent	Non-luminous
Kerosene stove	Opaque	Luminous
Sun	Opaque	Luminous
Moon	Opaque	Non-luminous
Fire fly	Opaque	Luminous

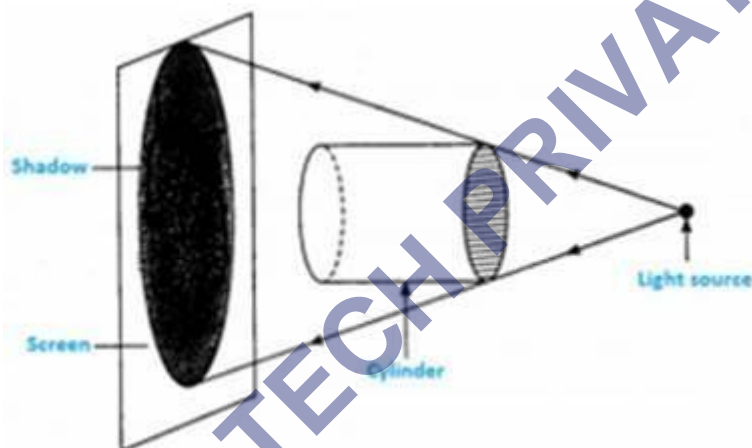
Q. 3

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?

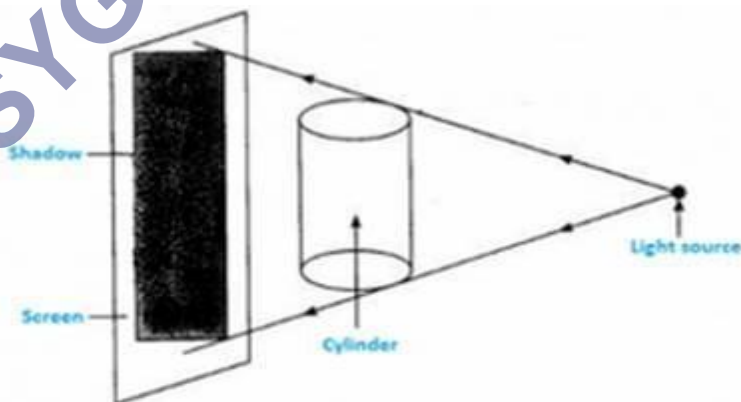
Answer:

Yes, there are many things that give a circular shadow if held in one way and a rectangular shadow if held in another way.

(a) Circular shadow with cylinder:



(b) Rectangular shadow with cylinder:



Q. 4

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

Answer:

No, in completely dark room, one cannot see any image in the mirror because there is no light in the room so no reflection of light takes place and no image will be formed

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