Chapter - 10.

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D) Answer the following questions :-

1) Write the difference between transparent and translucent objects with examples.

Ans :-

Transparent Object	Translucent Object
i) The objects that allow light to pass through them and through which things can be seen clearly are called transparent objects.	i) The objects through which things can be seen partially are called translucent objects.
ii) They do not form any shadows.	ii) They form faint shadows.
iii) For eg: water, glass.	iii) For eg: Mist, clouds.

2) List some properties of shadows.

Ans :- Some properties of shadows are :-

(i) The shape of a shadow may or may not match with that of the object.
It all depends on the position in which the object is held in path of light.

(ii) The size of a shadow increases if the opaque body is close to the source of light and away from the screen.

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3) Explain formation of shadows at different times of a day.

Ans:- At different times of day, the shadows formed will have different lengths.

- In the morning, the length of the shadow is longer than the actual object and points to the west.
- As the sun gradually rises until midday, the shadow becomes shorter, and at noon, it is shortest.
- In the afternoon, the length of the shadow is longer and points towards the east.

4) How does day and night occur on Earth?

Ans:- Day and night on Earth is caused by Earth's rotation around its axis.
The Earth is spherical in shape. During rotation, one side of the earth faces the sun and receives light and heat. Thus, this part experiences day. The other half remains in the dark and do not receive sunlight and heat, thus experiences night.

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5) Explain the formation of solar eclipse. How is it different from lunar eclipse?

Ans:- When the moon comes between the sun and the earth, it blocks the sunlight from reaching the earth, and casts a shadow on the earth. This is called solar eclipse.

It is different from lunar eclipse in the following ways:-

a) Lunar eclipse occurs only on a full moon night, whereas solar eclipse occurs on a new moon day.

b) In a lunar eclipse, earth comes between sun and moon, whereas in solar eclipse, moon comes in between sun and the earth.

E) Give reasons for the following:-

1) Day and night occurs on our Earth.

Ans:- Day and night on earth is caused by Earth's rotation around its axis. Due to continuous rotation, each part on earth experiences day and night for about twelve hours each.

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2) Lunar eclipse occurs on a full moon ~~day~~ night.

Ans:- Lunar eclipse can occur only on the night of a full moon. During a total lunar eclipse, earth completely blocks direct sunlight from reaching the moon. The only light reflected from the lunar surface has been refracted by earth's atmosphere.

3) Shadow is always formed on opposite side of source of light.

Ans:- Light travels in a straight line. When an opaque object is kept in the path of light, the light is blocked by the object due to which a dark patch(shadow) is formed on the opposite side of the source of light.

4) During noon, the shadow is shortest.

Ans

The position of the sun affects the size of a shadow. At noon, the sun is directly overhead, so the rays fall vertically on the body and creates the shortest shadow.

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