

CBSE Sample Paper

Science Set- B

Class 6

Science Set B: Answers

Section- A

1. The sources of light that are man - made are called artificial sources of light. For example:
An electric bulb.
2. $1 \text{ cm} = 10 \text{ mm}$
 $1 \text{ cm}^3 = 1 \text{ cm} \times 1 \text{ cm} \times 1 \text{ cm} = 10 \text{ mm} \times 10 \text{ mm} \times 10 \text{ mm}$
 $= 1000 \text{ mm}^3$ Thus, there are 1000 mm in 1 cm^3 .
3. Paddy and wheat.
4. By eating a balanced diet.
5. Chair and table both are made of wood.
6. Two different types of oil obtained from plant seeds are mustard oil and sunflower oil.
7. The comparison of an unknown quantity with a standard known quantity is known as measurement.
8. Proteins.
9. Reticulate venation
10. Maharashtra is one of the states where cotton is grown.
11. (i) themocol, cork (ii) milk, sugar
12. Proteins help in repair and growth of our body. Haemoglobin is the protein present in blood.

13. The two effects of light on plants are:

1. Plants use light for the preparation of their own food through the process of photosynthesis.
2. Some plants (like sunflower) move in the direction of light.

14.

$$1 \text{ m} = 100 \text{ cm} = 1000 \text{ mm}$$

The height of the given person in cm will be 165 cm.

The height of the given person in mm will be 1650 mm.

15. Different food items contain different types of nutrients in them. Thus, by eating more than one dish in a single meal, we get more nutrients for our body.

16. The length of the needle = $(33.1 - 3.0) \text{ cm} = 30.1 \text{ cm}$

17. a) For solid-solid mixtures- Hand picking and winnowing

b) For liquid-solid mixtures- Filtration and evaporation

18. The transparent glass sheet can be converted into a translucent glass sheet by the following ways:

1. By covering one side of the glass with butter paper.
2. By covering one side with a thin sheet of plastic.

19.

- 1) Flower
- 2) Leaf
- 3) Stem
- 4) Root

20. Two hand operated devices are:

- a. Hand spindle (takli)
- b. Charkha

Charkha was made popular by Mahatma Gandhi.

- 21.** i) Jute is cultivated in West Bengal, Bihar and Assam.
(ii) It is cultivated during rainy season.
(iii) Jute is used for making gunny bags and ropes.

22.

1. The length of the scale that you are using to measure must be greater than the length of an object.
2. The eye must be placed just above the point that you are reading, otherwise there will be an error due to parallax.
3. If the zero mark of the scale is damaged or the edge of the scale is not smooth, then start the measurement from another mark.

23. Some important properties of light are as follows:

1. Light always travels in a straight line, which is called rectilinear propagation of light.
2. When light is obstructed by an opaque object, then a shadow of an object is formed behind it.
3. Light exhibits the property of reflection.

24. Dietary fibres are also known as roughage.

Roughage is mainly provided by plant products in our food.

Whole grains, pulses, potatoes, fruits and vegetables are the main sources of roughage.

Roughage does not provide any nutrient to our body. But it is essential component of our food as it helps our body to get rid of undigested food.

25.

- | | | |
|----|------------------|---------------------------|
| a. | Lustrous | Non lustrous |
| | Copper | Wood, Glass, Paper, Sugar |
| b. | Soluble in water | Insoluble of water |

Sugar

Wood, Glass, Paper, Copper

c. Transparent

Opaque

Glass

Copper, Wood, Paper, Sugar

26. Sprouts are obtained by keeping water soaked seeds in a vessel covered with a wet cloth overnight. On availability of adequate moisture, the seeds of plants germinate to give out a small white structure. At this stage, the seed is said to be sprouted. Sprouted seeds are rich in proteins, vitamins and minerals. So, they are beneficial for health.

27.

Creepers	Climbers
Stem is thin, delicate, weak and unable to stand erect.	Stem is long, flexible and go up entwined around the support.
May grow prostrate on ground or may get buried in the top soil	Take support of the nearby objects to climb
Examples: Pumpkin, grass etc.	Examples: Pea etc.

28.

(a) We will add water to the test tube. If it dissolves, we will infer that the test tube has common salt, but if it does not dissolve then we will infer that it has chalk.

(b) In order to separate the mixture of saw dust and sugar, we will follow these steps:

- 1) Add water to the mixture.
- 2) Sugar present in the mixture dissolves in water but saw dust does not.
- 3) The solution is then filtered through filter paper.
- 4) We will get sugar solution as filtrate and saw dust will remain on the filter paper.
- 5) Then the solution is heated and when water evaporates completely, sugar is left behind.
- 6) In this way, we will separate the mixture of sugar and saw dust.

29. Plants are characterised into three types on the basis of several features. One of the features is type of stem.

Trees: They are tall, have hard, thick and woody stems.

Shrubs: They are of medium height, have hard and woody stems.

Herbs: They are short and have tender, green and short stems.

30. Food is obtained from both animals and plants. Fats obtained from animals are ghee and cod (fish) liver oil. Mustard oil and groundnut oil are the fats obtained from plants.

31. Take two boxes such that one can slide into the other with no gap in between them. Cut the same side of each box. Make a small hole in the middle of the opposite side of the larger box and cut out a square from the middle of the opposite side of the smaller box. This open square should be covered with a tracing paper. Slide the smaller box inside the larger one in such a way that its side with the tracing paper is inside.

Use of pinhole camera:

Hold the camera and look through the open face of the smaller box. Cover yourself and the camera with a black cloth. Now, look the distant objects like a tree, a building which are in bright sun shine through the camera. Adjust the smaller box by moving it back and forth to get an image on the tracing paper.

Or,

Solar eclipse : When the sun, the earth and the moon comes in a straight line with the moon in between the earth and the sun, then the shadow of the moon falls on the earth. This results in **solar eclipse**. Solar eclipse takes place on a new moon day.

Lunar eclipse: When the sun, the earth and the moon comes in a straight line with the earth in between themoon and the sun, then the shadow of the earth falls on the moon. This results in **lunar eclipse**. Lunar eclipse takes place on a full moon day. The shadow consists of two parts. One part is the darkest part of the shadow where light does not reach from the source of light and this part is known as umbra. Other part is not completely dark where some light reaches from the source of light and this part is known as penumbra. Penumbra surrounds the umbra.

32.(i) Weaving and knitting

(ii) Spinning

(iii) Cotton and jute

Or,

(i) **Natural fibres:** Wool and Jute. Wool is an animal fibre which is obtained from silkworm and jute is a plant fibre obtained from plant.

(ii) **Synthetic fibres:** Acrylic, Polyester and Rayon. These are man-made fibres and are prepared from different chemical substances.

33. For wooden base, 1 m = 100 cm

For iron nails, 3 cm

For iron pipe, 2 dm = 2 dm x (10 cm/1 dm) = 20 cm

For foot rest, 1.5 feet = 1.5 feet x (12 inches/1.0 feet)

= 18 inches

= 18 inches x (2.54 cm/1inch)

= 45.72 cm

For mica sheet, 50 inches = 50 inches x (2.54 cm/1 inch)

= 127 cm

Now, adding all the lengths (as they all are in same units) we get,

Total Length = (100 + 3 + 20 + 45.72 + 127) cm = 295.72 cm

Or,

Following are three different types of motion:

(i) Rectilinear motion: In this type of motion, objects move in a straight path, for example – a freely falling stone.

(ii) Circular motion: When the object moves on a circular path, it is said to execute a circular motion. In circular motion, an object moves in such a way that its distance from a fixed point does not change, for example – motion of the tip of the hand of a clock.

(iii) Periodic motion: A motion that repeats itself at regular intervals of time is called periodic motion, for example – revolution of earth around sun.

34. (i) 50 yellow coloured T-shirts of same size of same company cannot be sorted into different groups because all the shirts are identical.

(ii) Your kitchen having 10 packets of 1 L full cream milk of Amul purchased from different shops cannot be sorted into different groups because all the packets of milk are identical irrespective of the shop from where they are purchased.

(iii) 100 pens of same shape but different colours can be sorted in different groups on the basis of colour.

(iv) Paper napkins of same packet are identical, so they cannot be sorted in different groups.

(v) All news papers of March 2010 kept in your store room can be sorted into different groups on the basis of days in a week. For example: One group can have papers of Monday, other of Tuesday etc.

Or,

(i) Appearance: Appearance of a material is compared in terms of colour, lustre, texture or physical state. A metal spoon shines whereas a wooden spoon does not shine. Materials that have lustre are called metals. Eg: copper, aluminium, gold etc.

(ii) Hardness

Soft materials: The materials that can be compressed or scratched easily are called soft. For example cotton, sponge.

Hard materials: The materials that cannot be compressed or scratched easily are called hard. For example, iron.

(iii) Solubility: Substances that disappear or dissolve completely in water are called soluble substances. For example, salt, sugar etc.

The substances that do not dissolve completely in water even after stirring for a long time are called insoluble substances. For example, chalk powder, saw dust etc.

(iv) Transparency

Transparent Materials: Substances through which things can be seen are transparent materials. For example, glass, water etc.

Opaque Materials: Substances through which things cannot be seen are opaque materials. For example, wood, iron etc.

Translucent Materials: The materials through which objects can be seen, but not clearly are known as translucent materials. For example, butter paper etc.

(v) Floating property: Some objects float on water while others sink in it. An object will float or sink in water depends on whether it is lighter or heavier than water. Materials lighter than water float, e.g., plastic, pencil etc. Materials heavier than water sink, e.g., iron nail, steel etc.

Section-B

- 35. (b) proteins.
- 36. (b) sprouts.
- 37. (b) rectilinear motion.
- 38. (a) winnowing.
- 39. (a) the bus is in motion
- 40. (c) rectilinear propagation of light.
- 41. (c) spices.
- 42. (a) fruits of cotton plant.
- 43. (b) ghee, spices.
- 44. (a) herbs.