

Maharashtra State Board
Class-VI Science
Board Paper –2
Solution

I.

1. (b)

A cubit is a length equal to the distance between the fingertips and the elbow.

2. (a)

The given diagram represents the stamen, which is the male reproductive part of the flower. It is responsible for the production of pollen grains.

3. (c)

Rose is a shrub because it is a medium-sized plant with a hard woody stem and branches out from the base.

4. (c)

The mantle occupies 82% of the Earth's total volume and mainly comprises minerals such as iron and magnesium.

5. (d)

A sieve is a tool consisting of a wooden, plastic or metal frame with a wire mesh or plastic net fitted onto it. In sieving, sieves of various mesh sizes can be used to separate stones of different sizes.

6. (c)

A spade is an example of a lever of third order in which the applied force is between the fulcrum and the load.

7. (a)

Living things require oxygen for respiration. They breathe in oxygen and give out carbon dioxide during respiration.

8. (b)

A rabbit runs away from a fox as a sudden response to the possibility of getting harmed.

9. (d)

Swallowed food passes into the stomach through the oesophagus by peristaltic movements.

10. (a)

Use of brake pads in the brake system of bicycles and automobiles increases friction which helps these vehicles to slow down or stop.

11. (b)

1 minute = 60 seconds

∴ 3 minutes = 3 × 60 seconds

= 180 seconds

Therefore, 3 minutes is equal to 180 seconds.

12. (d)

A child rolling on the grass has two types of motion—linear motion and rotational motion.

13. (d)

Plants such as sweet potato store food in their roots. Such roots are called storage roots. The roots also provide absorb essential minerals from the soil and provide support to the growing plant.

14. (b)

Both frog and fish are vertebrates. In case of rat and worm, rat is a vertebrate but worm is an invertebrate. In case of fish and jellyfish, fish is a vertebrate but jellyfish is an invertebrate. In case of giraffe and jellyfish, giraffe is a vertebrate but jellyfish is an invertebrate.

15. (a)

A and B are both non-living components and thus are called abiotic components, while C and D are living components and thus are called biotic components.

II.

16.

(a) Unicellular living things: *Amoeba*, *Paramecium*

(b) Plants which excrete waste in the form of gum: Babool, neem

17. The corolla is made of petals. Petals are colourful and the fragrant part of the flower. Their role is to attract insects for pollination.

18.

No. of pages in the book = 200

Thickness of each page = 0.1 mm

∴ Thickness of the book = No. of pages × thickness of each page

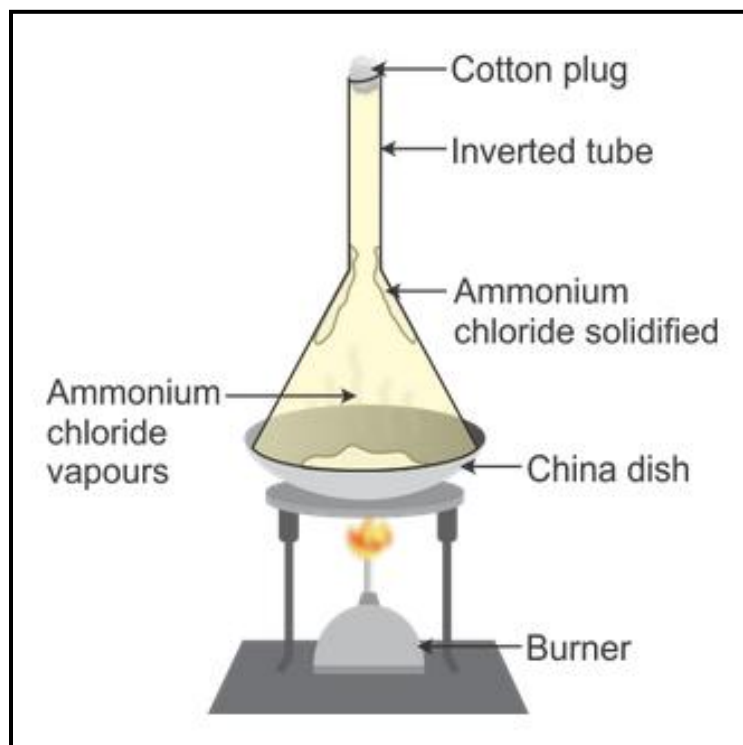
= 200 × 0.1 mm

= 20 mm

= 2 cm

Therefore, the thickness of the maths book is 2 cm.

19. Process of sublimation of a mixture of common salt and ammonium chloride:



20.

- (a) Small intestine : Absorption of useful substances :: Large intestine : Absorption of water
(b) Stomach : Gastric juice :: Small intestine : Intestinal juice

III.

21. Harmful effects caused by ozone layer depletion:

- (a) If the ozone layer is depleted, harmful rays of the Sun would reach the Earth's surface and can cause skin diseases in living things.
(b) Temperature on the Earth would increase resulting in global warming.
(c) Global warming will cause melting of ice in the polar regions. This in turn will cause a rise in sea levels.
(d) A rise in sea levels will submerge the nearby coastal areas.

22. Consumption of food stored in plastic bags for a long time could be harmful to our health. Shopkeepers often store eatables in plastic bags which have been used earlier for some other purposes. Sometimes, the bags collected by rag pickers are also used after washing them. Use of such recycled plastic bags to keep food items could be harmful to our health.

23. A farmer uses a crowbar and pushes one end of this crowbar under the boulder and rests the bar on a small stone. He applies a downward force on the other end of the crowbar which easily moves the huge boulder aside. The fixed support acts as a fulcrum. The farmer applies force or effort at one end, and the load of the boulder is at the other end. Thus, the crowbar acts as a first order lever which helps the farmer to move the boulder stuck in a muddy field.

24. Factors responsible for the development of serious crises on the Earth:

- (a) Excessive consumption of natural resources
- (b) Pollution of natural resources
- (c) Drainage of sewage water directly into rivers
- (d) Indiscriminate cutting of trees
- (e) Hunting and poaching

25.

Calculations should be done in the same units.

Converting 0.92 m into cm, we get $0.92 \text{ m} = 92 \text{ cm}$

Length of the pencil = Reading at second end - Reading at first end

$$= 92 - 25$$

$$= 67 \text{ cm}$$

But, $1 \text{ cm} = 10 \text{ mm}$

$\therefore 67 \text{ cm} = 670 \text{ mm}$

It is important to change the different readings obtained to the same unit.

Otherwise, it might create calculation errors, which are most likely to occur in such questions.

IV.

26.

	Movements	Type of motion
(a)	Crawling of a baby	Random motion
(b)	Bullock working on a sugarcane press	Circular motion
(c)	A squirrel climbing a tree rapidly	Non-uniform linear motion
(d)	Children swinging on the branches of a banyan tree	Oscillatory motion

27.

- (a) Settling tanks allow heavy impurities in the water to settle at the bottom. The clear water above them can then be collected separately and used for some other purposes.
- (b) Water and petrol do not mix with each other. Such immiscible liquids can be separated using a separating funnel. When we add water and petrol in a separating funnel, they form separate layers. As petrol is lighter, it floats on the surface of water and can be collected separately.

28.

- (a) Cap found at the tip of the root: Root cap
- (b) Part of the stem between two nodes: Internode
- (c) Small leaf-like part at the base of the leaf: Stipule
- (d) Broad and bulging base of the flower: Thalamus

29. A weighbridge is a type of scale used to weigh the goods loaded in a truck. The approximate weight of an unloaded or an empty truck is generally known. The loaded truck is then driven on to the steel platform of the weighbridge which has a special scale underneath. In this way, the weight of the loaded truck is obtained. By subtracting the weight of the empty truck from the weight of the loaded truck, the weight of the goods can be found out. Nowadays, electronic weighbridges are also used.

30. Living organisms require oxygen for respiration. They take in oxygen and release carbon dioxide during this process. Plants use the carbon dioxide during photosynthesis; they prepare their food in the presence of sunlight and chlorophyll and release oxygen back in the atmosphere. In this way, oxygen cycles in the atmosphere.