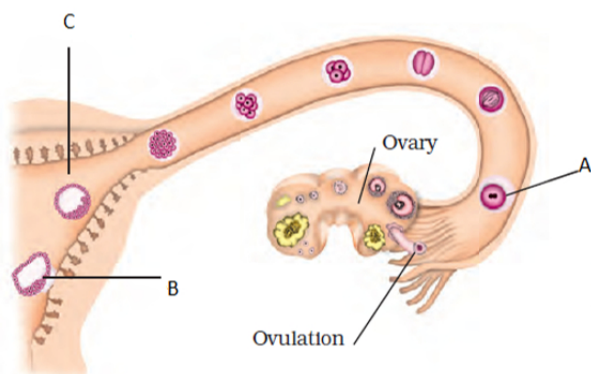


24. Explain why, atmospheric pressure decreases as we go higher up above the earth's surface? [4]
25. State advantages and disadvantages of fluid friction? [4]
26. Show experimentally that sound waves can travel through liquids. [4]
27. Briefly describe an activity to show that there may be a change of colour in the solution during a chemical reaction. [4]
28. Explain two natural destructive phenomena. [4]
29. Explain the structure and working of a human eye. [4]

Section D

30. Read the text carefully and answer the questions: [5]

Anuj has drawn diagram related to zygote formation and development of an embryo from the zygote.



- (i) Identify B in the figure given above

- a) Zygote
- b) None of these
- c) Uterus
- d) Embedding embryo

- (ii) Identify the figure given below



- a) Balls of cell
- b) none of these
- c) Cyst
- d) Zygote

- (iii) Ovum or eggs are formed in

- a) testes
- b) Oviduct
- c) ovary
- d) penis

- (iv) The embryo continues to develop in the uterus.

- a) True
- b) False

- (v) Fertilization results in the formation of _____ which begins to develop into an embryo.

31. Read the text carefully and answer the questions: [5]

Teacher of class 8 performed the following activity in the class.

Step 1 - Take a plastic bottle. Fix a cylindrical glass tube, a few cm long near its bottom

Step 2 - Cover the mouth of the glass with a thin rubber sheet.

Step 3 - Now fill the bottle up to half with water.

Step 4 - Some changes occur. Pour some more water in the bottle.



- (i) The above activity demonstrates
- | | |
|---------------------------|-------------------------|
| a) Weight exerts pressure | b) Water exert pressure |
| c) None of these | d) Air exert pressure |
- (ii) Pressure exerted by liquid decreases by
- | | |
|--|------------------------------|
| a) Decrease width depth | b) Increases with depth |
| c) Is different in different direction at the same depth | d) Doesn't change with depth |
- (iii) The rubber sheet has been fixed on the side of the container and not at the bottom indicate
- | | |
|---|---|
| a) container does not exert pressure | b) Container exert pressure on the side of wall |
| c) Container exert pressure on the bottom | d) None of these |
- (iv) The force acting on a unit area of a surface is called
- (v) Gases, too, exert pressure on the walls of their container.
- | | |
|---------|----------|
| a) True | b) False |
|---------|----------|

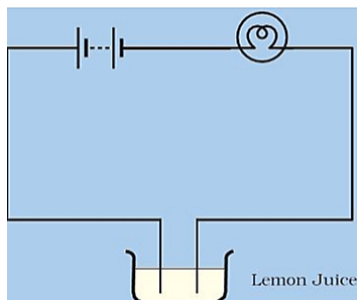
32. **Read the text carefully and answer the questions:**

[5]

Step 1 - Collect a few small plastics or rubber caps of discarded bottles and clean them.

Step 2 - Pour one teaspoon of lemon juice or vinegar in one cap. Bring your tester over this cap and let the ends of the tester dip into lemon juice or vinegar.

Step 3 - Take care that the ends are not more than 1 cm apart but at the same time do not touch each other.



- (i) Which of the following is a bad conductor of electricity?
- | | |
|--------------------|--------------------|
| a) Distilled water | b) Copper sulphate |
| c) Sulphuric acid | d) Silver nitrate |
- (ii) Pure or distilled water is a

- a) Poor conductor
 - b) None of these
 - c) Good conductor
 - d) Both Good and Poor conductor
- (iii) Which of the following does not conduct electricity?
- a) Caustic soda solution
 - b) Lemon juice solution
 - c) Vinegar solution
 - d) Sugar solution
- (iv) Substances that do not conduct electricity are called _____.
- (v) Plastics are poor conductor of electricity.
- a) True
 - b) False

Solution

Section A

1. (a) Winnowing
Explanation: Winnowing
2. (d) Lungs
Explanation: Tuberculosis (TB) is a disease caused by germs that are spread from person to person through the air. TB usually affects the lungs, but it can also affect other parts of the body, such as the brain, the kidneys, or the spine.
3. (d) high pressure and high temperature
Explanation: Dead plants slowly get converted to coal under high pressure and high temperature. This type of fuel is known as fossil fuel.
4. (a) does not burn
Explanation: Due to presence of water in paper cup ignition temperature of wet paper cup gets increased and paper will not burn when placed over a flame until water gets evaporated.
5. (c) Tiger
Explanation: Tiger
6. (d) Zoo
Explanation: Zoo
7. (a) Budding
Explanation: Hydra reproduces asexually by formation of small outgrowth on the body that enlarge and separate out as new species called budding.
8. (c) 18 years
Explanation: Initially girls grow faster than boys. At the age of 18 years both boys and girls reaches to their maximum height.
9. (c) either in rest or in motion
Explanation: either in rest or in motion
10. (c) Heat
Explanation: Friction produces heat. When two surfaces in contact rub each other produces friction resulting in the production of heat. All machines get warm due to this.
11. (a) Sonometer
Explanation: Sonometer
12. (a) lightning flashes
Explanation: lightning flashes
13. (d) Silver
Explanation: Silver

Section B

14. Under unfavourable conditions of temperature and water, the microorganisms generally form a hard and tough covering called cyst. This protects them. After favourable conditions return, they emerge from their shell, multiply and go through their life cycles.

15. A fuel is a form of matter, that is used to produce heat energy or power by burning.

The characteristics of a good fuel are :

- (a) It must be easily available.
 - (b) It must have low cost.
 - (c) It should be clean and odourless.
 - (d) It should be easily transportable.
 - (e) It should produce more energy, in proportion to its mass.
 - (f) It should leave very little ash after burning.
16. When fire brigade arrives, it pours water on the fire. Water cools the combustible material so that its temperature is brought below its ignition temperature. This prevents the fire from spreading. Water vapour also surrounds the combustible material, helping in the cutting off the supply of air. So the fire is extinguished.



Firemen extinguish the fire by throwing water under pressure

17. Yes. Soil erosion removes the fertile top layer of the soil thereby, exposing the hard rocky lower layers which are less fertile.

18. No, the solution of sugar in distilled water is a poor conductor of electricity and therefore current cannot pass through it.

19. Lateral inversion is the effect produced by a plane mirror in reversing images from left to right. As we observe our image on a plane mirror, we can see that our left side is at the right side of the image and our right side is at the left side of the image. It is also known as perversion.

Section C

20. a. Paddy is cultivated in the rainy season as it is a Kharif crop.

b. For sowing paddy seeds are first grown in the nursery then the seedlings are transplanted into the fields. This process helps in selecting healthy and better seedlings for cultivation so that we can get good quality crops.

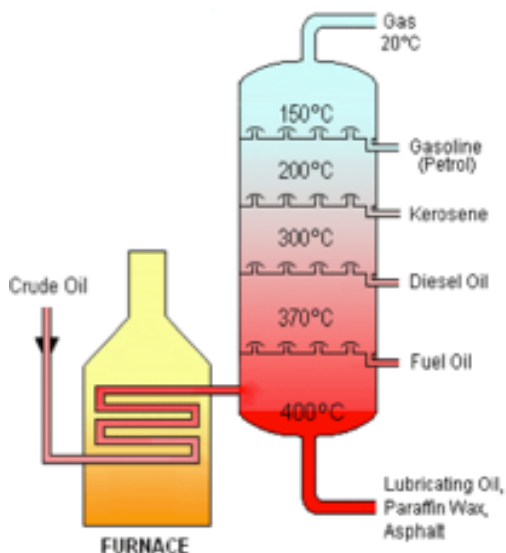
c. Harvested grains should be properly dried under the sun to remove moisture. Dried neem leaves should be added to stored grains to prevent the attack of pests. We can spray rodenticides or insecticides from time to time to prevent the attack of rodents or insects. In this way, we can prevent spoilage and insect attack of harvested grains.

21. The crude petroleum oil which is obtained after drilling the rocks is a complex mixture of hydrocarbons. Crude petroleum oil has to be refined or purified before its different constituents can be used.

The process of separating crude petroleum oil into useful constituents or fractions is called refining. Petroleum is refined in a petroleum refinery.

The different constituents of petroleum such as petroleum gas, petrol, diesel, lubricating oil, paraffin wax and bitumen are

separated based on their different boiling point ranges.



22. In process of budding a small outgrowth of the parents body developed into a new individual. Eg:- commonly found in hydra. In each hydra there may be one or more bulges. These bulges are the developing new individuals called as buds. And in hydra the new individuals develop as outgrowths from a single parent.
23. a. **Thyroid gland** produces the hormone thyroxine. If not produced in adequate amount, person is likely to suffer from goitre.
b. **Pancreas** produces the hormone insulin. If not produced in adequate amount, the person suffers from diabetes.
c. **Adrenal gland** produces the hormone adrenalin. It helps the body to adjust to stress.
24. The atmospheric pressure above the surface of the earth is maximum at the sea level. It is because air column above us is the highest at the sea level. As we go up in the atmosphere from the surface of the earth, the atmospheric pressure goes on decreasing. It is because the weight of air goes on decreasing due to which the pressure also decreases. Hence the pressure at the top of the mountain will be much less than at the base.
25. **Advantages:**
- a. Friction with air makes the windmills work, which are a source of wind energy. Similarly, friction with water makes the turbines works in the hydroelectric power plants.
 - b. Friction of propeller blades with air, propels a glider or a small aircraft in air.

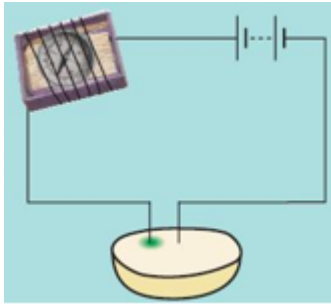
Disadvantage

- a. Speed of the object reduces, as fluid friction opposes the motion of the object.
 - b. Energy of the object is lost in overcoming fluid the friction when moving through the fluid. This reduces their efficiency.
26. To show that sound travel through liquids, take a bucket full of water and a bell. Now hold the bell gently and dip it into the water bucket, making sure that your hand or bell does not touch the sides of the bucket. Bend your head into the bucket so that your ear touches the surface of water. Gently shake the bell inside the water, you will be able to hear the sound of bell clearly. Thus it is clear that sound waves can travel through liquids.

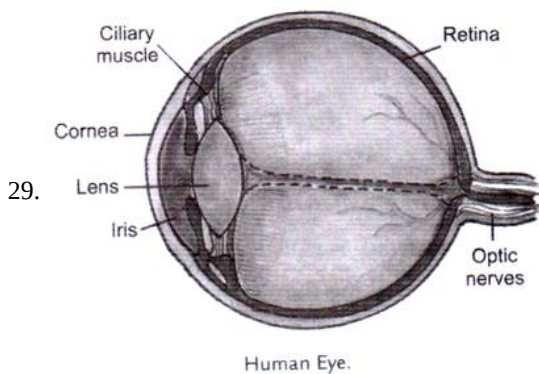


27. There may be a change of colour in the solution during a chemical reaction.
- Cut a potato into two halves and insert the copper wires of a tester into it. After half an hour, there is a greenish blue spot on the potato around one wire whereas there was no such spot around the other wire. It is observed that always the wire connected to the positive terminal, develops a greenish blue spot around it. This can be used to identify the positive terminal of the battery concealed in a box. This shows that the fresh fruits and vegetables conduct electricity to some extent due to the presence of

various salt solutions in them.



28. Lightning is a natural phenomenon that has fascinated people for ages. Several people thought and researched about the cause of lightning and its process. Benjamin Franklin discovered for the first time that there is an electric discharge between clouds that produces a spark, and it is the electric spark between the clouds and the earth that appears as lightning. His famous kite experiment proved this fact. The occurrence of lightning is as follows. The formation of clouds involves friction between water particles in the atmosphere. The friction charges the particles. Among the positive and negative charges, the negative charge accumulates at the bottom of the cloud and the positive charges in its top. As the accumulation of the charge increases, the cloud will create a positive charge on the ground nearby. As the amount of charge increases, the negative charge on the cloud tends to make a path towards the ground and it results in a narrow streak of electrical discharge which we call lightning. The earth's lithosphere is fragmented into many pieces. Each fragment is called a plate, also called tectonic plate, these plates are in continual motion, when they brush past one another a plate goes under another because of collision and they cause disturbance in earth's crust, this disturbance shows up as an earthquake on the surface of earth. The Richter scale is used to rate the magnitude of an earthquake that is the amount of energy it released.

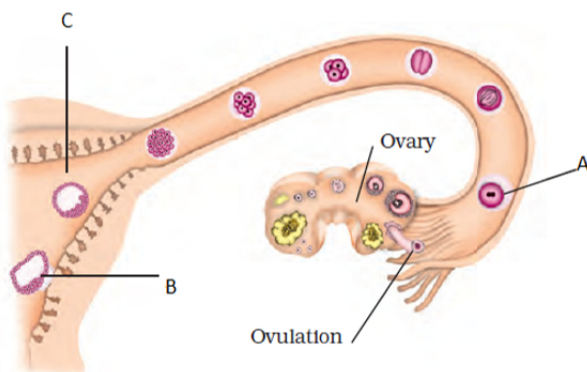


The eye has a roughly spherical shape. The outer coat of the eye is white. It is tough so that it can protect the interior of the eye from accident. Its transparent front part is called cornea. Behind the cornea, we find a dark muscular structure called iris. In the iris, there is a small opening called pupil. The size of the pupil is controlled by the iris. The iris controls the amount of light entering into the eye. Behind the pupil of the eye is a lens which is thicker at the centre. The lens focuses light on the retina. The retina contains several nerve cells. Sensations felt by the nerve cells are then transmitted to the brain through the optic nerves. There are two kinds of cells; cones and rods.

Section D

30. Read the text carefully and answer the questions:

Anuj has drawn diagram related to zygote formation and development of an embryo from the zygote.



- (i) (d) Embedding embryo

Explanation: Embedding embryo

- (ii) (a) Balls of cell

Explanation: Balls of cell

- (iii) (c) ovary

Explanation: ovary

- (iv) (a) True

Explanation: True

- (v) 1. zygote

31. Read the text carefully and answer the questions:

Teacher of class 8 performed the following activity in the class.

Step 1 - Take a plastic bottle. Fix a cylindrical glass tube, a few cm long near its bottom

Step 2 - Cover the mouth of the glass with a thin rubber sheet.

Step 3 - Now fill the bottle up to half with water.

Step 4 - Some changes occur. Pour some more water in the bottle.



- (i) (b) Water exert pressure

Explanation: Water exert pressure

- (ii) (b) Increases with depth

Explanation: Increases with depth

- (iii) (b) Container exert pressure on the side of wall

Explanation: Container exert pressure on the side of wall

- (iv) 1. pressure

- (v) (a) True

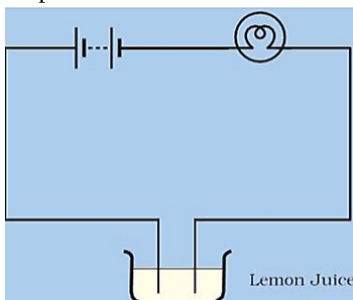
Explanation: True

32. Read the text carefully and answer the questions:

Step 1 - Collect a few small plastics or rubber caps of discarded bottles and clean them.

Step 2 - Pour one teaspoon of lemon juice or vinegar in one cap. Bring your tester over this cap and let the ends of the tester dip into lemon juice or vinegar.

Step 3 - Take care that the ends are not more than 1 cm apart but at the same time do not touch each other.



- (i) (a) Distilled water

Explanation: Distilled water

- (ii) (a) Poor conductor

Explanation: Poor conductor

(iii) **(d)** Sugar solution

Explanation: Sugar solution

(iv) 1. insulator

(v) **(a)** True

Explanation: True