

# Class VIII Session 2025-26

## Subject - Science

### Sample Question Paper - 9

Time Allowed: 3 hours

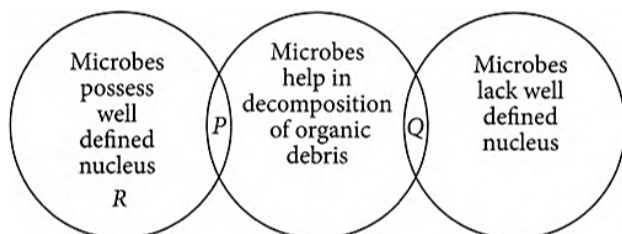
Maximum Marks: 80

#### General Instructions:

1. The question paper consists of 34 questions and is divided into four sections, A, B, C and D.
2. All questions are compulsory.
3. Section A comprises question numbers 1 to 15. These are multiple choice questions carrying one mark each. You are to select one most appropriate response out of the four provided options.
4. Section B comprises question numbers 16 to 22. These are SAQs carrying two marks each.
5. Section C comprises question numbers 23 to 31. These are SAQs carrying four marks each.
6. Section D comprises question numbers 32 to 34. These are SAQs carrying five marks each.

#### Section A

1. Ploughing is a method of preparing soil. It is beneficial as [1]
  - a) it removes weeds
  - b) helps roots to penetrate deeper
  - c) helps roots to breathe easily
  - d) All of these
2. Refer to the given Venn diagram. [1]



Select the incorrect option regarding organisms P, Q and R.

- a) P and Q are aerobic whereas R is anaerobic.
  - b) P could be Rhizopus and R could be Giardia.
  - c) R could be an alga, a protozoan or any parasitic fungi.
  - d) P forms thread like structures called hyphae whereas Q is unicellular.
3. Carbonation is [1]
    - a) process of separating various constituents of petroleum.
    - b) conversion of dead vegetation into coal.
    - c) process of getting coke from coal.
    - d) process of getting coke, coal tar, and coal gas from coal.
  4. The type of combustion which can cause lot of air pollution is: [1]
    - a) incomplete combustion
    - b) complete combustion



- c) slow combustion d) spontaneous combustion
5. Deforestation affects the [1]  
a) abiotic factors b) biotic and abiotic factors  
c) flora d) fauna
6. External fertilisation is very common in [1]  
a) toads, fish and cats b) hens, fish and starfish  
c) toads, frogs and starfish d) frogs, fish and rats
7. Which one of the following is correctly matched? [1]  
i. Adrenaline - Growth hormone  
ii. Insulin - Female hormone  
iii. Oestrogen - Stress reliever hormone  
iv. Testosterone - Male hormone  
a) option (iv) b) option (ii)  
c) option (i) d) option (iii)
8. The size of an air bubble rising up in water [1]  
a) increases b) may increase or decrease  
c) remains same d) decreases
9. Fluid friction can be minimized by [1]  
a) Decreasing volume b) Adding salts to fluid  
c) Giving suitable shape d) Increasing volume
10. We must never put a sharp, pointed things into our ear because it can [1]  
a) Reduce the thickness of eardrum b) Damage cochlea  
c) Break auditory nerve d) Damage eardrum
11. In the process of electrolysis, what type of energy transformation takes place? [1]  
a) electrical ® chemical b) heat ® electrical  
c) chemical ® heat d) chemical ® electrical
12. An object becomes charged when the atoms in the object gain or lose [1]  
a) Proton b) Positron  
c) Neutron d) Electron
13. A real image is formed when two or more [1]  
a) Reflected rays meet b) Both Reflected rays meet and Refracted rays meet  
c) Reflected rays appear to meet d) Refracted rays meet
14. State whether the given statement is True or False: [1]  
Biosphere reserves are the areas meant for conservation of mountains only.
15. State whether the given statement is True or False: [1]



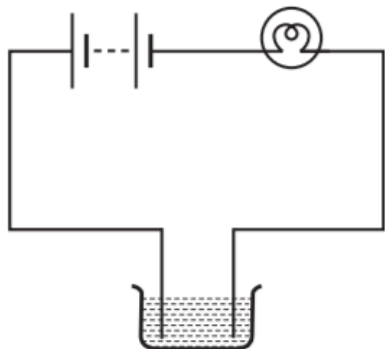
Sliding friction is another name for static friction.

### Section B

16. What are viruses? Name some common diseases in human caused by virus. [2]
17. Explain why fossil fuels are exhaustible natural resources. [2]
18. Which type of materials are used to control the fire caused by kerosene and diesel? [2]
19. A few of Paheli's classmates eat potato chips and burgers regularly during recess at school. Are they healthy eating habits? Give reasons. [2]
20. Sketch larynx and explain its function in your own words. [2]
21. How does an atom becomes negatively or positively charged? What are such type of atoms called as? [2]
22. What is the relation between the number of images formed and the angle between the two mirrors? [2]

### Section C

23. Excessive use of chemical fertilisers is not good for a farmland. Give reason. [4]
24. List any 3 advantages of using CNG as fuel? [4]
25. The newborn baby is completely dependent on its mother and feeds on her milk. At this stage too, the mother needs to take adequate nourishment to meet the demands of her own body and the growing baby. Which key nutrients are essential for both the mother and newborn baby during the breastfeeding period, and how does the mother's diet impact the quality of breast milk? [4]
26. What are the secondary sexual characters in girls? [4]
27. What are non-contact forces? Explain different types of non-contact forces. [4]
28. Define frequency, amplitude and time period of a vibration. [4]
29. The bulb does not glow in the setup shown in Fig. List the possible reasons. Explain your answer. [4]



30. What is the reason behind the lightning that we see in the sky during rainy season? [4]
31. State three uses of a plane mirror. [4]

### Section D

32. How can we say that fish exhibits external fertilisation? [5]
33. a. What is meant by atmospheric pressure? What is the cause of atmospheric pressure? [5]  
b. Why are our bodies not crushed by the large pressure exerted by the atmosphere?
34. What are the two methods of testing an insulator or a conductor? [5]

# Solution

## Section A

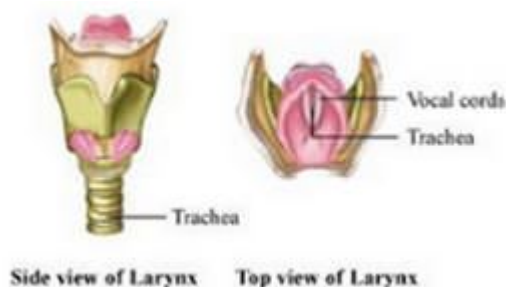
1.  
**(d)** All of these  
**Explanation:**  
All of these
2. **(a)** P and Q are aerobic whereas R is anaerobic.  
**Explanation:**  
According to the given Venn diagram, P is a saprophytic fungus, Q is a saprophytic bacterium and R could be an alga, a protozoan or a parasitic fungus.
3.  
**(b)** conversion of dead vegetation into coal.  
**Explanation:**  
The slow process of conversion of dead vegetation into coal is called carbonization.
4. **(a)** incomplete combustion  
**Explanation:**  
Incomplete combustion of fuel causes lot of air pollution. During incomplete combustion, carbon monoxide gas is produced which is very harmful for health of humans.
5.  
**(b)** biotic and abiotic factors  
**Explanation:**  
biotic and abiotic factors
6.  
**(c)** toads, frogs and starfish  
**Explanation:**  
External fertilisation is a mode of reproduction in which a male organism's sperm fertilises a female organism's egg outside of the female's body. For example, In amphibian (toads, frogs), mostly algae, bryophytes, salmon, starfish, etc. external fertilisation takes place in water.
7. **(a)** option (iv)  
**Explanation:**  
Testosterone is a male sex hormone secreted by testis. It promotes secondary sexual characteristics such as increased muscle and body mass and the growth of body hair. Adrenaline hormone is a stress hormone or emergency hormone. Insulin is secreted by  $\beta$  cells of islet of Langerhans of pancreas, and oestrogen is a female hormone secreted by graffian follicles on the ovaries.
8. **(a)** increases  
**Explanation:**  
increases
9.  
**(c)** Giving suitable shape  
**Explanation:**  
Liquid and gases are called fluid. Friction in fluid can be minimized by giving suitable shape called streamline shape. As streamlined shape is narrow at the ends and broader in the middle due to which it reduces the fluid friction and helps an object to move forward easily.



10. **(d) Damage eardrum**  
**Explanation:**  
 We must never put sharp, pointed things into our ear because it can damage eardrum. Eardrum is thin membrane at the junction of outer ear and middle ear.
11. **(a) electrical ® chemical**  
**Explanation:**  
 electrical ® chemical
12. **(d) Electron**  
**Explanation:**  
 An object becomes charged when the atoms in the object gain or lose electron. The object that gains electron becomes negatively charged and one who loose electron becomes positively charged.
13. **(b) Both Reflected rays meet and Refracted rays meet**  
**Explanation:**  
 Both Reflected rays meet and Refracted rays meet
14. **(b) False**  
**Explanation:**  
 False
15. **(b) False**  
**Explanation:**  
 False

### Section B

16. Viruses are microscopic organisms. They however reproduce only inside the cells of host organism, which may be a bacterium plant or animal. Some diseases like cold, influenza (flu), polio and chicken box are caused by viruses.
17. It takes millions of years for the formation of fossil fuels. The rate at which we are using them is very fast compared to the rate of their formation. Due to this, fossil fuels are exhaustible in nature.
18. Fires caused by kerosene and diesel can be controlled by special materials such as fire-retardant chemical dust and fire-cooling protein foam which are available only at fire stations.
19. No, these are not healthy eating habits because burgers and potato chips have very little nutritional value. Although, these are very tasty but can never replace regular meals that form a balanced diet and is essential for adolescents for their normal growth and development.
20. In humans, the sound is produced by the voice box or the larynx. It is situated in the throat. Below it is the wind pipe. The two vocal box or larynx in such away that it leaves a narrow slit between them for the passage of air when the lungs force air through the slit, the vocal cords vibrate producing sound.



21. An atom becomes negatively or positively charged by gaining or losing one or more electrons. A charged atom is called an ion.

$$22. \text{ Number of images} = \frac{360}{\text{degree of angles between the mirrors} - 1}$$

### Section C

23. Excessive use of chemical fertilisers damages the soil, making it less porous. They reduce the water-holding capacity of the soil, make it acidic, and kill soil organisms. The soil will not be able to regain fertility.

24. **The advantages of using CNG as fuel are:**

- i. They can be burnt directly.
- ii. They can be transported easily through pipe lines.
- iii. They are clean fuels and do not give smoke when burnt.
- iv. They give a lot of heat energy when burnt.

25. The key nutrients essential for both the mother and newborn baby during the breastfeeding period include protein, calcium, iron, omega-3 fatty acids, and vitamin D. These nutrients play crucial roles in the baby's growth and development, as well as in maintaining the mother's health and energy levels.

26. In girls, breasts begin to develop at the time of puberty. These features help us to distinguish the male from the female. These characters are called secondary sexual characters. Hair grows under the arms and in the region above the thighs or the pubic regions in girls.

27. The forces which can be exerted from a distance, without establishing a contact non-contact forces.

Some non-contact forces are:

**(i) Magnetic force:** Magnetic force is a kind of force that magnets exhibit to pull or push other magnets and metal objects like iron and nickel. If the same pole of two magnets are placed near each other they will repel, while if unlike poles are placed near each other they attract each other.

**(ii) Electrostatic force:** Electrostatic is a type of force that is exerted by a charged body on another charged or uncharged body. It pulls lighter objects towards itself once it is charged. Electric air purifiers in factories use this concept to purify the air from its chimneys.

**(iii) Force of gravity:** Every object in the universe exerts a force on another object. This force is called gravitational force. It is the gravitational force of various celestial bodies which keeps them in their position in the space. This is a non-contact force as it acts from a distance.

28. The number of oscillations made by an object in one second is known as **frequency**. The SI unit of frequency is Hertz.

The maximum displacement of the object from its mean position is known as **amplitude**. The SI unit of amplitude is meter.

The time taken to complete one oscillation by an object is called **time period**. The SI unit of time is second.

29. The bulb may not glow because of the following reasons:

- i. Liquid in the beaker is non-conducting. In such case, the electric current would not be able to pass through the liquid. Hence, the circuit is not complete.
- ii. Electric current in the circuit is very weak. This can happen if the material used for making the circuit is not a good conductor of electricity or the battery does not have sufficient energy to generate electricity.

30. We know that during the development of a thunderstorm there is upward and downward movement of air currents. The vigorous movements of water droplets in the clouds cause separation of charges. By a complex process, not completely understood, positive charges accumulate near ground and negative charges in the clouds.

As soon as negative charges from the clouds and positive charges on the ground meet huge amount of energy is produced as bright light and sound, what we see as lightning. The process is called electric discharge.

The process of electric discharge can occur between two clouds, between clouds and the earth, even between clouds and the human body. Such lightning strokes could be fatal.

31. Uses of plane mirrors:

- i. We commonly use plane mirrors in our homes to look at our reflection. In beauty parlours, plane mirrors kept at an angle are used to view the side of the head. Plane mirrors parallel to each other are used to view the back of the head.
- ii. Plane mirrors are used to reflect light on an object. For example, during outdoor shooting of a film, metal sheets are used as plane mirrors to reflect sunlight on the actors.
- iii. They are also used in solar cookers to reflect light on the food being cooked.
- iv. They are used in periscopes. From a submarine under the sea, a sailor can see objects and enemy ships on the surface of the sea by using a periscope.

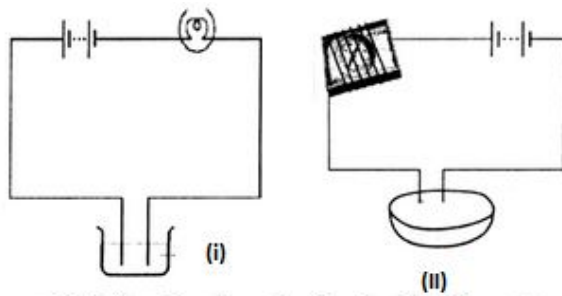
### Section D

32. Fishes are oviparous organisms. This means that they do not give birth to young fishes, instead, they lay eggs which further develop into young fishes. The eggs that they lay are unfertilized. The female fishes lay unfertilized eggs and the male fishes



produce sperms. Both these gametes float in water. When sperm comes in contact with the eggs, there is a fusion of nuclei between the two. Hence fertilization occurs. As this fertilization takes place outside the body of the organism, it is called external fertilization.

33. a. The layer of air above the earth is called atmosphere. The air has weight, so it exerts a pressure on the surface of the earth, which is called atmospheric pressure.  
Atmospheric pressure is due to the weight of air present in the atmosphere above us. It acts in all directions.
- b. Our body has blood which flows in every cell through blood vessels. Our blood itself exerts a pressure that is greater than the atmospheric pressure. Since atmospheric pressure from outside our body is balanced by the blood pressure acting from inside, we do not get crushed.
34. The following two methods are used to test the conduction.
- i. We use an electric lamp to test conductivity. An electric lamp is attached to the electric circuit. If the substance allows the current to pass through it, the bulb will start glowing. Otherwise the bulb will not glow. This method does not work when current is very small. In such cases magnetic compass is used.
- ii. A magnetic tester is used to test conductivity when current is allowed to pass through it, it creates a magnetic field and the compass shows deflection. The deflection of compass shows that the current is passing through circuit.



Methods to show the testing of conductivity of lemon juice.