

# Class VIII Session 2025-26

## Subject - Science

### Sample Question Paper - 4

**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. Which of the following gas is evolved in the process of anerobic digestion of organic waste? [1]  
a) Biogas  
b) Oxygen gas  
c) Nitrogen gas  
d) Water gas
2. There are more anti - banterial drugs than anti - viral drugs because: [1]  
a) Viral diseases are intracellular.  
b) Drugs can penetrate bacteria more effectively.  
c) Virus is smaller than bacteria.  
d) Bacterial diseases are intracclular.
3. Which of the following can help in saving petrol and diesel? [1]  
I. Drive the vehicle at constant and moderate speed.  
II. Switch off the vehicle's engine at traffic lights.  
III. Keep air pressure in the tyres of vehicles low.  
IV. Regular engine tuning of the vehicle.  
a) I, II and IV only  
b) I and II only  
c) II and IV only  
d) III and IV only
4. If 10 kg of a fuel X produces 1,60,000 J of heat on complete combustion then, the calorific value of X is [1]  
a) 16 kJ/kg  
b) 1.6 kJ/kg  
c) 16000 J/kg  
d) 160 kJ/kg
5. The Red Data Book keeps a record of all the [1]  
i. endemic species.  
ii. endangered plants.



iii. extinct species.

iv. endangered animals.

a) i & iv

b) ii & iii

c) ii & iv

d) i & ii

6. The number of nuclei present in a zygote is [1]

a) One

b) Four

c) None

d) Two

7. Puberty ends when an adolescent reaches: [1]

a) Reproductive maturity

b) Mental growth

c) Maximum height

d) Physical growth

8. Choose the correct option. [1]

I. A blunt knife cuts with difficulty because of increased pressure it creates.

II. On increasing the level of height, atmospheric pressure decreases.

a) II only

b) I only

c) Both I and II

d) Both are incorrect

9. Which one of the following personalities uses spikers in shoes? [1]

a) painter

b) Rugby player

c) Lawyer

d) Doctor

10. If we listen to the sound of lightening 10 sec after observing it how far are we from the place where lightening occurs? [1]

(Take, speed of sound = 330 m/s)

a) 825 m

b) 3300 m

c) 1650 m

d) 330 m

11. Which one of the following solutions will not conduct electricity? [1]

a) Lemon juice

b) Vinegar

c) Tap water

d) Vegetable oil

12. A gold leaf electroscope [1]

a) produces charge

b) All of these

c) identifies a charged body

d) measures charge

13. \_\_\_\_\_ is used in car headlights to reflect the light of the bulb. [1]

a) Concave lens

b) Convex mirror

c) Concave mirror

d) Convex lens

14. State whether the given statement is True or False: [1]

Largest tiger reserve in India is Ranthambore National Park.

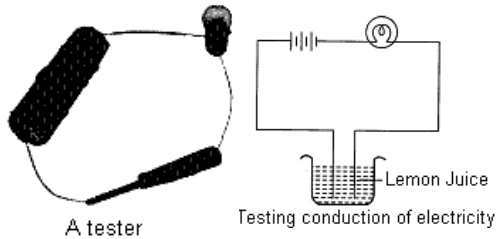
15. State whether the given statement is True or False: [1]

Sprinkling powder on the carom board reduces friction.



### Section B

16. Explain with example what are chemoheterotroph bacteria? [2]
17. Which type of coal has 60% of carbon content? [2]
18. Why any of the fuel is not considered as an ideal fuel? [2]
19. Explain the change in body shape of boys and girls. [2]
20. List three sources of noise pollution in your locality. [2]
21. In previous class you have used a tester as shown in figure given below to test whether electric current passed through a particular material or not? When this tester is used for liquids sometimes even though the liquid allows the electric current to pass and the circuit is complete, bulb does not glow. What can be the reason? [2]



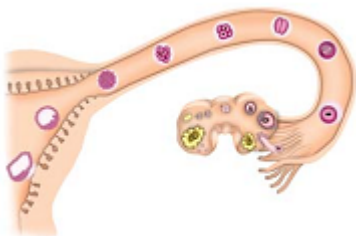
22. Why one should include the vitamin A rich eatables in their diet? What are the main source of vitamin A? [2]

### Section C

23. Write a paragraph in your own words on Sowing [4]
24. Why are fossil fuels consider as non-renewable sources of energy. Why? [4]
25. What is fertilisation? Explain various types of fertilisation. [4]
26. **Define the terms** [4]
- a. Menopause
  - b. Menarche
  - c. Adolescence
27. Two persons are applying forces on two opposite sides of a moving cart. The cart still moves at the same speed in the same direction. What do you infer about the magnitudes and direction of the forces applied? [4]
28. What is an Echo? When one can hear the echo of sharp sound? Why cannot we hear an echo in a small hall? [4]
29. Is electric shock lethal? What should be done in case of electric shock? [4]
30. What is seismograph? Explain its construction and functioning. [4]
31. Write the differentiate between Luminous and Non Luminous objects. [4]

### Section D

32. After observing Fig. answer the following. [5]



- a. Read the following statements and label them in the figure:
- i. The part which produces female gametes.
  - ii. The part where the development of the baby takes place.
  - iii. The part through which the developing embryo passes to reach the uterus.
- b. Explain the future development of the embryo that would take place after it gets embedded in the uterus.

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. a. What is meant by the chemical effect of electric current? Explain with help of an example? [5]  
b. Name any two application of the chemical effect of electric current.



# Solution

## Section A

1. **(a)** Biogas  
**Explanation:**  
Biogas
2. **(d)** Bacterial diseases are intracellular.  
**Explanation:**  
Bacterial diseases are intracellular.
3. **(a)** I, II and IV only  
**Explanation:**  
Air pressure in the tyres should be just correct.
4. **(a)** 16 kJ/kg  
**Explanation:**  
10 kg of X produces heat = 1,60,000 J  
1 kg of X will produce heat =  $\frac{1,60,000}{10}$  J = 1,6000 J = 16 kJ  
Hence, calorific value of fuel X = 16 kJ/kg
5. **(c)** ii & iv  
**Explanation:**  
ii & iv
6. **(a)** One  
**Explanation:**  
Zygote is formed by fusion of male and female gametes. Each zygote contains one nuclei having 2n number of chromosome.  
Zygote is the first cell of life.
7. **(a)** Reproductive maturity  
**Explanation:**  
Puberty ends when an adolescent reaches reproductive maturity and becomes able to reproduce physically and mentally as well.
8. **(a)** II only  
**Explanation:**  
A blunt knife creates relatively less pressure due to increased cutting edge area. As we go up in the atmosphere from the surface of earth, the atmosphere pressure goes on decreasing.
9. **(b)** Rugby player  
**Explanation:**  
Rugby player
10. **(b)** 3300 m  
**Explanation:**  
Given, speed of sound = 330 m/s and time, t = 10 s  
We know that, speed =  $\frac{\text{distance}}{\text{time}}$   
 $\therefore$  distance = speed  $\times$  time



So, distance travelled by sound in 10s.

$$= 330 \times 10 = 3300 \text{ m}$$

11.

**(d)** Vegetable oil

**Explanation:**

Vegetable oil will not conduct electricity because it does not make ions easily.

12.

**(c)** identifies a changed body

**Explanation:**

identifies a changed body

13.

**(c)** Concave mirror

**Explanation:**

Concave mirror

14.

**(b)** False

**Explanation:**

False

15. **(a)** True

**Explanation:** True

### Section B

16. E.coli, a bacterium found in human intestines, is a chemoheterotroph as it uses the sugar (glucose), an organic compound, as its source of carbon and energy.

17. Lignite

18. Ideal fuel is the fuel which is inexpensive, it is easily available, it should have a high calorific value, it should neither burn too fast or too slow and it should leave no residue on combustion. Therefore, if a fuel is said to be an ideal fuel, it should contain all these qualities. We see that no fossil fuel is having all these properties. Therefore, no fuel can be considered as an ideal fuel.

19. Senior boys have broader shoulders and wider chests than boys in junior classes because they have entered the age of puberty when shoulders generally broaden as a result of growth. In girls, the region below the waist becomes wider.

In boys, the muscles of the body grow more prominently than in the girls. Thus, changes occurring in adolescent boys and girls are different.

20. Sources of noise pollution are as follows:

i. Horns of vehicles

ii. Loudspeakers of temples

iii. Generators running without silencers.

21. Due to the heating effect of current, the filament of the bulb gets heated to such a high temperature that it starts glowing.

However, if the current through a circuit is too small, the filament of the bulb does not get heated to a high temperature and it does not glow. The reason why is the current in the circuit small is that though a material may conduct electricity, it may not conduct it as easily as a metal. As a result, though the circuit of the tester becomes complete and the current flows through it, the current is too small.

22. Lack of vitamin A in foodstuff is responsible for many eye troubles. Most common amongst them is night blindness. One should, therefore, include in the diet components which have vitamin A. Raw carrots, broccoli and green vegetables such as spinach (palak), methi, amaranth and cod liver oil are rich in vitamin A. Eggs, milk, curd, paneer, butter, ghee and fruits such as papaya, banana, mango, apple, dates etc. also contain plenty of vitamin A.

### Section C

23. Sowing is the process of putting seeds in the soil. Seeds are sown in the field by following three method



- i. **Broadcasting:** Seeds are sown manually by directly scattering them into the soil. This process is called broadcasting. It is the traditional method.
  - ii. **Seed drills:** The other method is to use a seed drill. Farrow are the long narrow trench made in the ground for sowing seeds or irrigation. The tool used traditionally for sowing seeds is shaped like funnel. The seeds are filled into the funnel, passed down through two or three pipes having sharp ends.
  - iii. **Transplantation:** there are certain crops like paddy and some vegetables for which seeds are not directly sown in the field. They first germinated in nurseries and then the seedlings are transferred to the main field. This process is known as transplantation.
- Nowadays a seeds drill is used for sowing with the help of tractors. Those tool sows the seeds uniformly at a proper distance and depth.

24. Fossil fuels like coal, petroleum, natural gas etc., once exhausted completely, cannot be renewed immediately.

It is a very long and slow process.

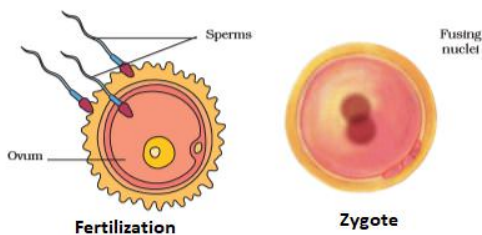
It takes millions of year to form again. So it is always suggest to use them carefully and conserve for future generation.

Hence fossil fuels consider as non- renewable source of energy.

25. When sperms come in contact of an egg, one of the sperms may fuse with the egg. Such type of fusion of sperm and egg is called fertilisation. In this process formation of zygote takes place. There are following two types of fertilisation: (i) Internal fertilisation (ii) External fertilisation.

i. **Internal fertilisation:** The fertilisation in which fusion of egg and sperm takes place inside the body of female is called internal fertilisation. Internal fertilisation takes place in many animals like, cow, dogs, hens and human beings.

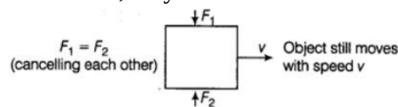
ii. **External fertilisation:** The fertilisation in which fusion of egg and sperm takes place outside the body of female is called external fertilisation. It is very common in aquatic animals like fish, frog and starfish etc.



- 26. a. **Menopause-** stoppage of menstruation at 45 to 50 years of age is termed as menopause.
- b. **Menarche** - the first menstrual flow begins at puberty and is termed as menarche.
- c. **Adolescence-** the period of change when the body undergoes changes, leading to reproductive maturity is called adolescence.

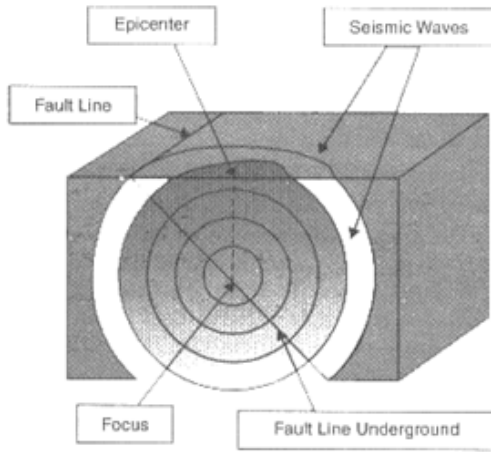
27. We infer about the magnitudes and direction of the forces applied that:

- i. The magnitude of forces will be equal and the same.
- ii. The forces will act in the opposite direction.
- iii. As a result, they cancel out each other and the net effect will become less.



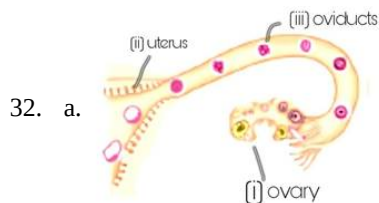
- 28. Echo is the repetition of sound due to the reflection of original sound by a large and hard obstacle. An echo can be heard only if you are 17 meters away from the surface that reflects sounds. In a small hall distance is less than 17 meter that is why we cannot hear an echo in a small hall.
- 29. The electric shocks vary in their effect, as they can be mild to severe, sometimes they even lead to death i.e. lethal. Electric shocks can cause severe burns and tissue damage. The function of the heart can also be disrupted by a strong electric shock. Irreparable injury to vital organs result into lethality. If shock occurs indoors, immediate disconnection of power supply is required. If a person is in contact with source of electric current, stand on a dry rubber mat, wooden slab etc and try to move the person using a completely dry wooden pole.
- 30. The tremors produce waves on the surface of the earth. These are called seismic waves. The waves are recorded by an instrument called the seismograph. The instrument is simply a vibrating rod, or a pendulum, which starts vibrating when tremors occur. A pen is attached to the vibrating system. The pen records the seismic waves on a paper which moves under it. By studying these waves, scientists can construct a complete map of the earthquake, as shown in fig. They can also estimate the energy associated with the

earthquake, which determines its power to cause destruction.



31.	<b>Sr. No.</b> <b>Luminous objects</b>	<b>Non Luminous objects</b>
1.	The objects which emit their own light are known as luminous objects. They are also called source of light.	The objects which do not emit their own light are known as Non luminous objects.
2.	Examples: The Sun, fire, flame of a candle and an electric lamp.	Examples: Table, chair, the Moon, the planets, a tree, etc.

#### Section D



32. a.
- b. After the embryo gets implanted in the maternal uterus, its gradual development continues. Body parts such as hands, legs, head, etc. develop and the resultant fetus starts to resemble adult human beings in terms of body parts and structure. When the development of the fetus is complete, the mother delivers the baby, i.e. the fetus is expelled out from the mother's body.
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 don't get crushed.
34. a. When electric current is passed through a conducting solution, some chemical reaction takes place. The resulting effects are called chemical effects of electric current.
- Examples:
- When electric current is passed through water, water dissociates into hydrogen and oxygen.
  - When electric current is passed through the solution of a metal salt, such as solution of copper sulphate, metal gets deposited at the negative electrode, because metal is positively charged.
  - Sometimes, the colour of solution also changes when electric current passes through it.
- b.
- Electroplating: One metal is coated on the other substance or metal by the effect of electric current. This is called electroplating.
  - Electrolysis: The compound is decomposed into its constituents under the effect of electric current is called electrolysis.

