

**Class VIII Session 2024-25**  
**Subject - Science**  
**Sample Question Paper - 8**

**Time Allowed: 3 hours**

**Maximum Marks: 80**

**General Instructions:**

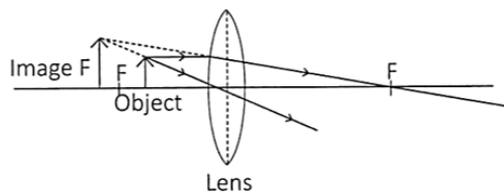
1. The question paper consists of 34 questions and is divided into four sections, A, B, C and D.
2. All questions are compulsory.
3. Section A comprises question numbers 1 to 15. These are multiple choice questions carrying one mark each. You are to select one most appropriate response out of the four 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. The method which allows selective cultivation of only healthy seedlings is: [1]
  - a) Transportation
  - b) Transpiration
  - c) Broadcasting
  - d) Transplantation
2. Food and mouth disease occurs in cattle due to: [1]
  - a) a protozoan
  - b) a virus
  - c) a bacterium
  - d) a fungus
3. Process of heating coal in the absence of oxygen is called: [1]
  - a) destructive condensation
  - b) destructive distillation
  - c) carbonisation
  - d) fractional distillation
4. If a combustible substance is present along with fire: [1]
  - a) substance will not burn at all.
  - b) substance will not catch fire above its ignition point.
  - c) substance will not catch fire below its ignition point.
  - d) substance will catch fire immediately.
5. A National Park provides protection to [1]
  - a) entire ecosystem
  - b) flora and fauna
  - c) flora only
  - d) fauna only
6. Sexual reproduction is better mode of reproduction because offspring [1]
  - a) Are bigger in size
  - b) Have better chances of survival

- c) Are identical to one another  
d) Faster mode of reproduction
7. If fertilization doesn't occur, the ovum is released out from [1]  
a) None of these  
b) menstrual cycle  
c) sweat  
d) urine
8. Which force/s helps/help us walk? [1]  
a) Magnetic force  
b) Muscular force  
c) Electrostatic force  
d) Friction
9. A box is pushed alternately on a slippery and on a rough surface. On which surface is it more likely to turn on its edges? [1]  
a) On both the surfaces the chances are equal  
b) On a slippery surface  
c) On a hard surface  
d) On a rough surface
10. The sound box attached with string instruments helps by [1]  
a) increasing the time-period of vibration of sound  
b) Increasing the wavelength of sound  
c) Increasing the frequency of sound  
d) Increasing the amplitude of sound
11. One kWh is equal to [1]  
a)  $3.6 \times 10^6$  watt  
b)  $3.6 \times 10^5$  Joule  
c)  $3.6 \times 10^6$  Joule  
d)  $3.6 \times 10^5$  watt
12. A device used to test whether an object is carrying charge or not is called [1]  
a) Charge meter  
b) Electrometer  
c) Electroscope  
d) Voltmeter

13. Study the given diagram. It shows a converging lens producing an upright, virtual image. [1]



Which optical instrument uses this arrangement?

- a) A Camera  
b) A magnifying glass  
c) A Photographic enlarger  
d) A Projector
14. State true or false: [1]  
The headquarter of IUCN is located in New York.
15. State true or false: [1]  
Friction is greater when two surfaces are pressed harder.

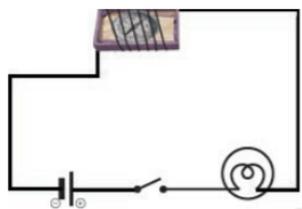
### Section B

16. How do the microorganisms survive under adverse conditions? [2]
17. Where do we get coal and how is it formed? [2]
18. It is difficult to burn a heap of green leaves but dry leaves catch fire easily. Explain. [2]

19. Explain the reproductive health. [2]
20. Suppose a stick is struck against a frying pan in a vacuum. Will the frying pan vibrate? Will we be able to hear the sound? Explain. [2]
21. Why chromium is used for electroplating? Why the objects which have chromium plating are not made of chromium itself? [2]
22. Draw a labeled sketch of the human eye. [2]

### Section C

23. How was agriculture born? [4]
24. Name the products obtained and their uses when coal is processed in industry. [4]
25. Explain the development of embryo. [4]
26. Mention any three changes that are noticeable at the time of puberty? [4]
27. In the circuit shown in Fig. when the key is closed, the compass needle placed in the match box deflects. Name the force which causes this deflection. [4]



28. What is difference between noise and music? [4]
29. Purification of metals is possible through electrolysis. Describe this application. [4]
30. What is seismograph? Explain its construction and functioning. [4]
31. Explain how you can take care of your eyes. [4]

### Section D

32. How can we say that fish exhibits external fertilisation? [5]
33. Define electrostatic force. Why it is called a non contact force? Explain by giving examples. [5]
34. Manthan wants to electroplate his key chain with nickel to prevent rusting, for this electroplating, answer the following: [5]
- Name the electrolyte
  - Name the cathode
  - Give the reaction at the cathode
  - Give the reaction at the anode.

# Solution

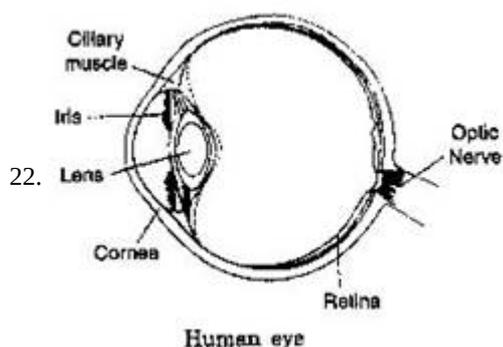
## Section A

1.  
**(d)** Transplantation  
**Explanation:** Transplantation is the method that allows selective cultivation of only healthy seedlings. Healthy seedlings are selected in the nursery and planted in the main field.
2.  
**(b)** a virus  
**Explanation:** Food and mouth disease is a common disease of cattle in which ulcers are formed in mouth as well as foot. The animals stop feeding. Foot and mouth disease is caused due to a virus.
3.  
**(b)** destructive distillation  
**Explanation:** The process of heating coal in the absence of oxygen is called destructive distillation of coal. Coke and coal gas are obtained from destructive distillation of coal.
4.  
**(c)** substance will not catch fire below its ignition point.  
**Explanation:** If a combustible substance is present along with fire, the substance will not catch fire below its ignition point. Ignition temperature is necessary for combustion of fuel.
5.  
**(a)** entire ecosystem  
**Explanation:** entire ecosystem
6.  
**(b)** Have better chances of survival  
**Explanation:** Sexual reproduction is better mode of reproduction because offspring have better chances of survival. Sexual reproduction leads to creation of variation that help in survival of species.
7.  
**(b)** menstrual cycle  
**Explanation:** menstrual cycle
8.  
**(d)** Friction  
**Explanation:** Friction prevents slippage on the ground and thus helps us in walking.
9.  
**(d)** On a rough surface  
**Explanation:** Turning effect is created by the frictional force by the ground. So on a rough surface, a box is more likely to turn on its edges.
10.  
**(d)** Increasing the amplitude of sound  
**Explanation:** The sound box helps in increasing the intensity of sound. It increases the amplitude of vibration of sound.
11.  
**(c)**  $3.6 \times 10^6$  Joule  
**Explanation:**  $3.6 \times 10^6$  Joule
12.  
**(c)** Electroscope  
**Explanation:** Electroscope is a device for detecting electric on an object. By using an electroscope, we can tell whether an object is electrically charged or not.

13. (b) A magnifying glass  
**Explanation:** A magnifying glass
14. (b) False  
**Explanation:** False
15. (a) True  
**Explanation:** True

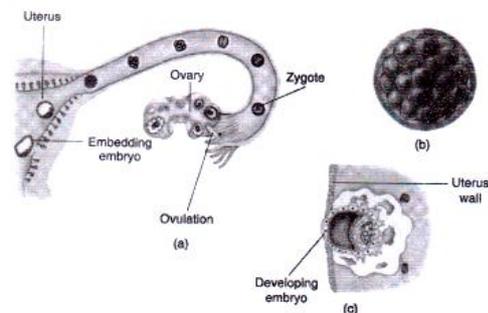
### Section B

16. Under unfavourable conditions of temperature and water, they generally form a hard and tough covering called cyst. This protects them. When favourable conditions come they emerge from their shell, multiply and go through their life cycles.
17. We get coal deep in the Earth's crust in coal mines.  
It is formed by the slow decomposition of dead trees and other vegetable matter buried deep in the earth's crust under high pressure and temperature.
18. Green leaves contain moisture and as a result, the ignition temperature of green leaves is much higher than that of dry leaves. Due to this, it is difficult to burn a heap of green leaves but dry leaves catch fire easily.
19. The physical and mental well being of an individual is regarded as an individual's health. To keep the body healthy, every human being, at any age, needs to have a balanced diet. The person must also observe personal hygiene and undertake adequate physical exercise. During adolescence, however, these become even more essential as the body is growing.
20. Yes, the frying pan will vibrate. Since it is being hit by the stick but vibrations need a medium to travel and there is no medium in a vacuum, so we cannot hear the vibrations produced.
21. Chromium has a shiny appearance, does not corrode and resists scratches. However chromium is expensive and it may not be to make the whole object out of chromium. So the object is made from a cheaper metal and only a coating of chromium over it is done.

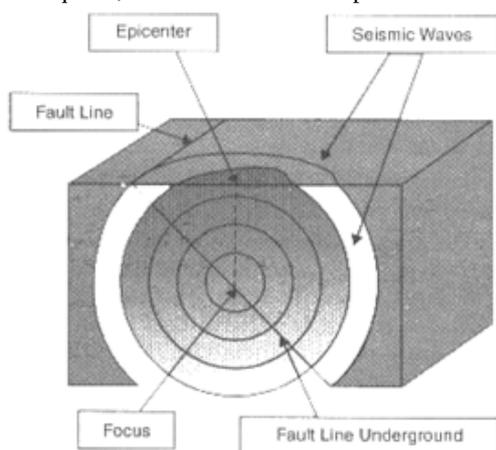


### Section C

23. Till 10,000 B.C. people were nomadic. They were wandering in groups from place to place in search of food and shelter. They ate raw fruits and vegetables and started hunting for animals for food. Later, they could cultivate land and produce rice, wheat and other food crops and they become producers. Thus, was born 'Agriculture'. Today 70% of the Indian population is engaged in food production.
24. Coal when processed in industry gives coke, coal tar and coal gas. Coke is used in the manufacture of steel and in extraction of many metals. Coal tar is used as starting material for manufacturing various substances such as synthetic dyes, drugs, explosives, perfumes, paints etc. Coal gas is used as fuel.
25. Fertilisation results in the formation of zygote which begins to develop into an embryo. The zygote divides repeatedly to give rise to a ball of cells. The cells then begin to form groups that develop into different tissues and organs of the body. This developing structure is termed as embryo. This embryo gets embedded in the wall of the uterus for further development. The embryo continues to develop in the uterus. It gradually develops body parts such as hands, legs, head, eyes and ears etc. This stage is called foetus. Mother gives birth to the baby when foetus developed completely.



- a. zygote formation and development of an embryo from the zygote;  
 b. Ball of cells (enlarged);  
 c. Embedding of the embryo in the uterus (enlarged).
26. a. **Increase in height**- During puberty, there is a sudden increase in height. At this time the bones of the arms and legs elongates and make a person look tall.  
 b. **Change in body shape**- in girls, the region below the waist becomes wider. Boys develop a broader shoulder and wider chests.  
 c. **Development of sex organs**- at puberty, male sex organs like the testes and penis develop completely. The testes also begin to produce sperms. In girls, the ovaries enlarge and eggs begin to mature. Also, ovaries start releasing mature eggs.
27. The magnetic force causes the deflection because:  
 i. When the key is closed, the current starts flowing in the wire.  
 ii. Due to the flowing current, the magnetic field is produced around the circuit.  
 iii. This exerts a magnetic force on the needle.  
 iv. As a result, the needle gets deflected.
28. Excessive or unwanted sounds are called noise. Noise is unpleasant to hear. E.g., Sound produced by a bunch of students speaking together in the classroom.  
 The sounds which are pleasing to the ears are called music. It gives a soothing effect rather than creating a chaos in mind. E.g., Sound produced by a harmonium sound.
29. Purification of metals can be done by electrorefining where metals are refined by electrolytic method. For example: copper, silver, nickel, gold, aluminium etc purified through electrorefining. The purified metal after electrolysis deposits at the negatively charged electrode i.e. the cathode and is collected from time to time.
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. It is necessary that we take proper care of our eyes. If there is any problem we should go to an eye specialists. Have a regular checkup. We must :
- (i) If advised, use suitable spectacles.  
 (ii) Too little or too much light is bad for the eyes. Insufficient light causes eyestrain and headaches. Too much light, like that of the sun, or powerful lamps, can injure retina, which is very delicate.  
 (iii) Do not look at the sun or a powerful light directly.

(iv) Never rub our eyes if any small particles or dust goes into our eyes. Wash our eyes with clean water. If condition does not improve, go to a doctor.

(v) Wash our eyes frequently with clean water.

(vi) Always read at the normal distance for vision.

#### 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. The force exerted by the electrically charged object is called electrostatic force.

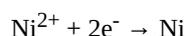
The electrostatic force can be exerted by a charged body on another body even from a distance when they are not in contact with each other, hence it is also called a non contact force.

For example, when a plastic comb is rubbed on dry hair and brought near the tiny pieces of paper, we will see that the tiny papers are attracted towards the comb. It is due to the electrostatic force exerted by the electric charges acquired by the comb.

34. i. Nickel Sulphate is the electrolyte

ii. Key chain is the cathode.

iii. Reaction at the cathode:



iv. Reaction on anode:

