

Class VIII Session 2024-25
Subject - Science
Sample Question Paper - 10

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.

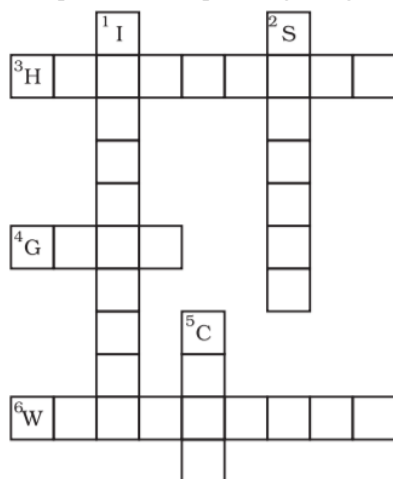
Section A

1. Birds can be kept away from field through: [1]
 - a) scarecrows
 - b) wire fences
 - c) spraying pesticides
 - d) spraying weedicides
2. Which of the following microbe contain more than one cell? [1]
 - a) slipper animalcule
 - b) bread mould
 - c) tobacco mosaic virus
 - d) baker
3. Arrange the following liquids in increasing order of boiling points. [1]
 - a) Naphtha < Petrol < Kerosene < Fuel oil
 - b) Kerosene < Fuel oil < Naphtha < Petrol
 - c) Fuel oil < Naphtha < Petrol < Kerosene
 - d) Petrol < Naphtha < Kerosene < Fuel oil
4. From the fire triangle(essential elements of fire) water removes: [1]
 - a) Oxygen
 - b) Both heat & oxygen
 - c) Heat
 - d) Combustible substances
5. National parks protect whole sets of ecosystems, while wildlife sanctuaries provide protection to _____. [1]
 - a) Wild animals
 - b) Fauna, flora and landscape
 - c) Wild flora
 - d) Wild fauna and flora
6. Male gametes are also called [1]
 - a) egg
 - b) antherozoid
 - c) sperm
 - d) Both antherozoid and sperm
7. The most conspicuous visible change that occurs in boys during puberty is: [1]

2. Keeping crop grains for a long time under proper conditions.
5. Certain plants of the same kind grown on a large scale.

Across

3. A machine used for cutting the matured crop.
4. A rabi crop that is also one of the pulses.
6. A process of separating the grain from the chaff.



24. List any 3 advantages of using CNG as fuel? [4]
25. Although 2 cells called gametes fuse, the product formed is a single cell called a zygote. Justify. [4]
26. Write a short note on AIDS. [4]
27. Two thermocol balls held close to each other move away from each other. When they are released, name the force which might be responsible for this phenomenon. Explain. [4]
28. Write any five sources of noise in your surroundings. [4]
29. What is the difference between a strong electrolyte and a weak electrolyte? [4]
30. What precautions would you take if lightning occurs while you are outside the house? [4]
31. What is reflection of light? State the laws of reflection. [4]

Section D

32. What do you mean by reproduction? Explain various modes of reproduction. [5]
33. Define pressure. Write its mathematical expression and SI unit. [5]
34. What is electrolysis? What are the signs of electrolysis? [5]

Solution

Section A

1. (a) scarecrows

Explanation: Birds can be kept away from fields through scarecrows, which is a hay-man or decoy in the shape of a human. It is usually dressed in old clothes and placed in open field to discourage and terrify birds.

2. (b) bread mould

Explanation: Baker's yeast, Tobacco Mosaic Virus, and Slipper animalcule (paramecium) are unicellular organisms and contain only one cell. Bread mould (Rhizopus) is filamentous multi-cellular fungi.

3. (d) Petrol < Naphtha < Kerosene < Fuel oil

Explanation: The increasing order of boiling points of given liquids is:
Petrol < Naphtha < Kerosene < Fuel oil

4. (b) Both heat & oxygen

Explanation: There are three essential requirements for producing fire. These are fuel, air (to supply oxygen), and heat (to raise the temperature of the fuel beyond the ignition temperature). Fire can be controlled by removing one or more of these requirements. Heat, oxygen and combustible substance forms the fire triangle that causes fire. Water removes the heat and oxygen when poured over burning substance that extinguishes fire.

5. (a) Wild animals

Explanation: National parks protected whole sets of ecosystems, while wildlife sanctuaries provide protection to wild animals. It is an area where animal habitats and their surroundings are protected from any sort of human disturbance. The capturing and killing are strictly prohibited in these regions.

6. (d) Both antherozoid and sperm

Explanation: Both antherozoid and sperm

7. (a) increase in height.

Explanation: The most clearly visible change during puberty is the sudden increase in height of boys and girls. Appearance of moustache and beard in boys and enlargement of the mammary gland in girls are other changes.

8. (a) 1 Pa

Explanation: The S.I. unit of pressure is Pascal. One Pascal is equal to the pressure that results from the action of one Newton of force on one meter square area.
So, 1 Pascal = 1 N / 1 sq m.

9. (a) East direction

Explanation: Here, friction will act opposite to direction of motion.

10. (c) SONAR

Explanation: SONAR

11. (b) silver and silver nitrate

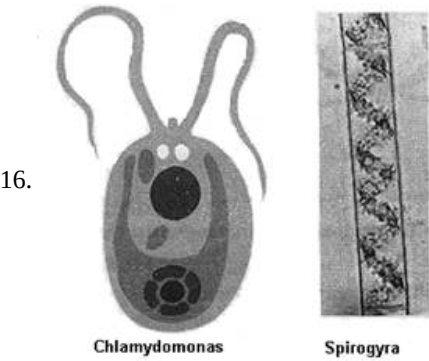
Explanation: silver and silver nitrate

12. (d) On the top of building

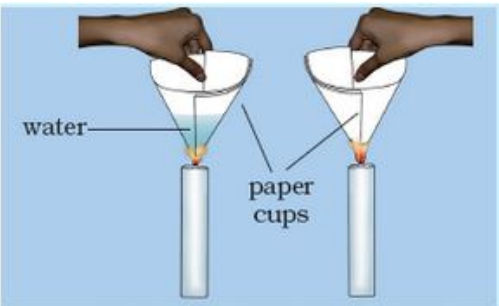
Explanation: On the top of building

13. (a) 45°
Explanation: 45°
14. (a) True
Explanation: True
15. (a) True
Explanation: True

Section B

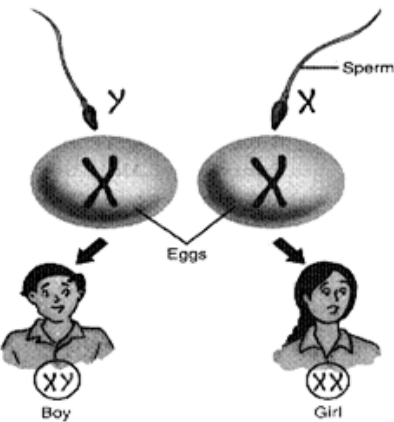


17. Petroleum is a dark oily liquid. It is a mixture of various fractions. Petroleum was formed from organisms living in the sea. As these organisms died, their bodies settled at the bottom of the sea and got covered with layers of sand and clay. Over millions of years, absence of air, high temperature and high pressure and action of microorganisms, transformed the dead organisms into petroleum and natural gases. The layer containing petroleum and natural gas is above that of water. Oil and gas are lighter than water and do not mix with it.
18. We take two paper cups. Take some water in one cup and keep the other empty. Heat both the cups. Empty cup starts to burn but the cup containing water does not burn. If we continue heating the water in the cup it starts boiling. The heat supplied to the paper cup is transferred to water by conduction. So in the presence of water the ignition temperature of paper is not reached. Hence, it does not burn.

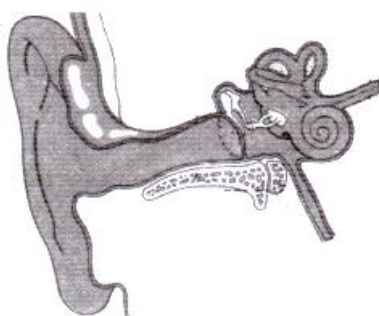


Heating water in a paper cup

19. Gametes in humans have 23 chromosomes, i.e. half the number in somatic cells. So, a sperm may have X or Y chromosome as 23rd chromosome. But, an ovum has X chromosome as 23rd chromosome.
- If a sperm with X chromosome fertilizes the egg, the zygote thus formed will lead to birth of a girl child.
 - If a sperm with Y chromosome fertilizes the egg, the zygote thus formed will lead to birth of a male child.



20. The hearing organs in humans are. Ears have a stretched structure called eardrum. When ears receive sound, it enters down the ear canal and reach eardrum. Vibrations of sound vibrate the eardrum and it sends vibrations to inner ear from which vibrations are sent to brain for interpretation of sound.



Human ear.

21. Heating effect of electric current is responsible for the bulb to glow in an electric circuit. Due to the heating effect, the filament of the bulb gets heated to a high temperature and it starts glowing.
22. There are two kinds of nerve endings
 - (i) cones which are sensitive to bright light and
 - (ii) rods which are sensitive to dim light. Besides, cones send message of colour. Where the optic nerve leaves the retina, there are no nerve endings. This is called the blind spot.

Section C

23. DOWN

1. Irrigation
2. Storage
5. Crop

ACROSS

3. Harvester
4. Gram
6. Winnowing

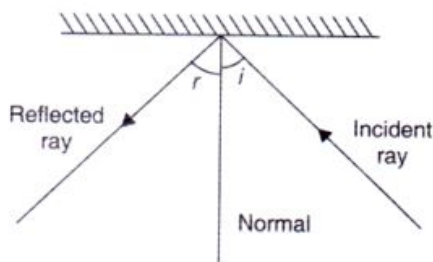
24. The advantages of using CNG as fuel are:

- 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. In the process of fusion of gametes during fertilization, there is mainly the fusion of nuclei of the male and the female gametes, i.e. the sperm and the ovum respectively. When a sperm reaches near the ovum, it comes in contact with it and releases its nucleus into the egg cell. There is fusion, thus of the nuclei of sperm and egg cells, inside the egg cell. The rest of the sperm body degenerates. And hence, the product formed is a single cell called a zygote.
 26. AIDS is caused by a dangerous virus, HIV. This virus can pass on to a normal person from an infected person by sharing the syringes used for injecting drugs. It can also be transmitted to an infant from the infected mother through her milk. The virus can be transmitted through sexual contact with a person infected with HIV.
 27. Electrostatic force is the force which might be responsible for this phenomenon because:
 - i. The electrostatic force is the force that is produced when charge bodies come together.
 - ii. It is given that two thermocol balls have similar charges.
 - iii. As we know that similar charges repel each other.
 - iv. Hence, they move away from each other due to the repulsion between them.
 28. Five sources of noise are:
 - (i) Noise is produced by traffic.
 - (ii) Noise produced by coolers, mixer-grinder etc.
 - (iii) Loud sound of TV, radio etc.
 - (iv) Loud music in marriages and other religious functions.
 - (v) Noise created by construction works in our surroundings.
 - (vi) Sound produced by crackers.
 - (vii) Use of desert cooler and air conditioners cause noise pollution.
 29. A strong electrolyte is a liquid which conducts electricity very well whereas a weak electrolyte is a liquid which conducts electricity to a lesser extent.
 30. Precautions to be taken, while we are outside the house during tightening

- i. Do not stand underneath a natural lightning rod such as a pole or a tall tree.
 - ii. Stand away from any fountain or any other water body.
 - iii. Stay away from tractors or other metal equipment like wire fences, metal pipes, rails, etc.
31. Reflection is a phenomenon in which a beam of light falls on some surface and returns back in different directions. It may be regular or irregular.

Following are the laws of reflection:

- (i) When a ray of light falls on a reflecting surface it is reflected back in such a way the angle of incidence is equal to the angle of reflection, i.e. $\angle i = \angle r$
- (ii) The incident ray, the normal and the reflected ray, all lie in the same plane.



Angle of incidence and angle of reflection.

Section D

32. The process of producing young ones of the same species is known as reproduction. It is very important process. It helps in the continuation of a species on the earth.

Modes of Reproduction: There are following modes of reproduction:

- (i) Sexual reproduction (ii) Asexual reproduction.

(i) Sexual reproduction: The process of reproduction in which two parents (male and female) are involved is called sexual reproduction. In this process male produces male gametes and female produces female gametes. Both the gametes are fused to form zygote. The zygote develops into baby. Example: cow, cat, dog and human beings.

(ii) Asexual reproduction: The mode of reproduction in which only one parent is involved to produce new young ones is called asexual reproduction. Budding, fragmentation spore formation and binary fission are the methods of asexual reproduction like in hydra, amoeba and bacteria etc.

33. Pressure is produced when a force acts on an object. It is defined as the force acting normally on a unit area of an object.

The mathematical expression for force is:

$$Pressure = \frac{Force}{Area}$$

The SI unit of pressure is newton per square metre which is also called pascals(Pa).

34. When electric current is passed through a conducting solution, some chemical reaction takes place in the solution. This is called chemical effect of electric current, or electrolysis. Some of the signs of electrolysis are as follows:

- Bubbles of gas may be formed at electrodes.
- Deposits of metal may be seen on electrodes.
- Change of colour of solution may occur.