Class VIII Session 2025-26
Subject - Science
Sample Question Paper - 2

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. Pests become resistant to poisonous chemicals: **[1]**

   a) If pesticides are sprayed in very high doses
   b) if pesticides are sprayed at correct time
   c) if pesticides are sprayed by an aircraft
   d) if pesticides are sprayed in appropriate doses

2. _____ convert nitrates to free nitrogen gas. **[1]**

   a) Nitrosomona
   b) Nostoc
   c) Nitrobacter
   d) Pseudomonas

3. Coal and petroleum can be categorised as: **[1]**

   a) replenishable natural resource
   b) non living natural resources
   c) living natural resources
   d) limitless natural resources

4. It is mainly found in Bio-Gas- **[1]**

   a) Methane
   b) Ethylene
   c) Hydrogen
   d) Chlorine

5. The book which helps a record of all the endangered animals and plants is **[1]**

   a) Pink Data Book
   b) Red Data Book
   c) Black Data Book
   d) Blue Data Book

6. The yellowish coloured milk secreted from the breast shortly after birth of the baby is called **[1]**

   a) Primary milk
   b) Lactogen
   c) Colostrum
   d) Tond Milk

7. The stage when the reproductive organs reach sexual maturity is called **[1]**

a) gestation
b) menstruation
c) puberty
d) fertilization

8. Read the following statements and mark the correct option. **[1]**

Statement 1: Force of friction depends on the actual area of contact.

Statement 2: Larger the area of contact, larger is opposition to motion.

a) Only 2 is correct
b) Both are incorrect
c) Only 1 is correct
d) Both are correct

9. Mobil oil is applied on iron shutters to _____ friction. **[1]**

a) keep same
b) decrease
c) remove
d) increase

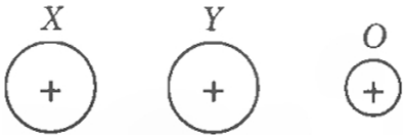
10. Plantation on the road side can **[1]**

a) Increase noise pollution
b) Increase air pollution
c) Reduce air pollution
d) Reduce noise pollution

11. When electric current is passed through a conducting solution, there is a change of colour of the solution. This indicates **[1]**

a) the magnetic effect of current.
b) the lightning effect of current.
c) the heating effect of current.
d) the chemical effect of current

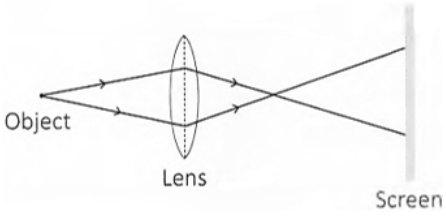
12. The given figure shows a small positively charged sphere O, kept near two larger positively charged spheres X and Y which are fixed. **[1]**



In which direction will the sphere O move?

a) Right
b) Down
c) Left
d) Up

13. A lens forms a blurred image of an object on a screen. **[1]**



How can the image be image sharp and in focus on the screen?

a) By moving the screen away from the lens and object
b) By moving the object away from the lens and screen
c) By using a brighter object at the same position
d) By using a lens of longer focal length at the same position

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

Reforestation is restocking of the destroyed forests by planting new trees.

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

If there is no friction, a moving object would never stop on its own.

Section B

16. What kinds of nutrition is shown by fungi? **[2]**
17. What is the difference between coke and coal? **[2]**
18. What do you mean by forest fire? **[2]**
19. What are the effects of sex hormones on adolescents? **[2]**
20. What do you mean by vacuum? What happens to the loudness of sound in vacuum? **[2]**
21. How is electroplating done? **[2]**
22. The angle between incident ray and reflected ray is 60°. What is the value of angle of incidence? **[2]**

Section C

23. Distinguish between kharif and rabi crops. **[4]**
24. What is black gold? Why it is called so? **[4]**
25. Discuss the importance of the umbilical cord and placenta in human beings. **[4]**
26. Write the names of the hormones and their fuction which are secreted by the adrenal gland and thyroid gland. **[4]**
27. Prove that the pressure exerted by water at the bottom of the container depends on the height of its column. **[4]**
28. What is frequency range for human ear? What is audible and inaudible sounds? **[4]**
29. How the magnetic effect of current can be used to detect current? **[4]**
30. Explain the accumulation of charges on clouds during a thunderstorm. **[4]**
31. Explain the atmospheric pressure used in the drinking straw. **[4]**

Section D

32. What is asexual reproduction? Write various methods of asexual reproduction. **[5]**
33. How do we see? **[5]**
34. Three different electrolysis cells A, B and C are connected in separate circuits. Electrolytic and cell A contains sodium chloride solution. When the circuit is completed a bulb in the circuit glows brightly. Electrolytic cell B contains acetic acid solution and in this case the bulb in the circuit glows dimly. The electrolytic cell C contains sugar solution and the bulb not glow. Give reason for each of these observations. **[5]**

Solution

Section A

1. **(a)** If pesticides are sprayed in very high doses
   Explanation:
   Pests become resistant to poisonous chemicals if pesticides are sprayed in very high doses for a longer duration. Pests change and develop resistant properties in course of time.

2. **(d)** Pseudomonas
   Explanation:
   Pseudomonas is a denitrifying bacteria that convert nitrates to free nitrogen gas.

3. **(b)** non living natural resources
   Explanation:
   Coal and petroleum are nonliving natural resources. They are present in earth crust in limited quantity. Coal and petroleum is non replenishable natural resources.

4. **(a)** Methane
   Explanation:
   Biogas consists mainly of methane and carbon dioxide. It can also include small amounts of hydrogen sulphide, siloxanes and some moisture. The relative quantities of these vary depending on the type of waste involved in the production of the resulting biogas.

5. **(b)** Red Data Book
   Explanation:
   Red Data Book

6. **(c)** Colostrum
   Explanation:
   The yellow coloured milk secreted from the breast shortly after birth of the baby is called colostrum. This milk provide immunity to child to protect against a number of diseases.

7. **(c)** puberty
   Explanation:
   puberty

8. **(b)** Both are incorrect
   Explanation:
   Both are incorrect

9. **(b)** decrease
   Explanation:

Mobil oil is applied on iron shutters to decrease the friction. After the applying of mobil oil, the shutter become very smooth and we could easily de-shutter it by applying less effort.

10. **(d)** Reduce noise pollution
Explanation:
Plantation on the road side can reduce noise pollution as plants are good absorber of sound and also reduce the carbon dioxide gas released by vehicles.

11. **(d)** the chemical effect of current
Explanation:
The passage of an electric current through a conducting solution causes chemical reactions. As a result, the change of color of solution occurs. This indicates the chemical effect of the current.

12. **(a)** Right
Explanation:
Due to similar charge, the two spheres push sphere O which moves towards right.

13. **(d)** By using a lens of longer focal length at the same position
Explanation:
By using a lens of longer focal length at the same position

14. **(a)** True
Explanation: True

15. **(a)** True
Explanation: True

Section B

16. Saprophytic, Heterotrophic, Parasitic and Symbiotic.

17.

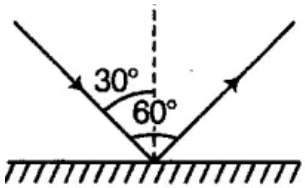
Coke	Coal
(a) It is an amorphous form of carbon.	(a) It is a non-crystalline form of carbon.
(b) It is obtained by heating soft coal in the absence or limited supply of air.	(b) It is obtained by the decay of vegetation, which existed millions of years ago.

18. During extreme heat in the hot summer days, at some places dry grass catches fire. It is because the heat is sufficient to attain ignition temperature of grass. From grass, it spreads to trees and very soon the whole forest is on fire. It is called forest fire. It is very difficult to control forest fire.

Forest fire.

19. In adolescents, the sex hormones stimulate growth and bring about changes in the structure of bones, muscles and skin. The sex hormones also bring about changes in the functions of the reproductive organs.
20. The decreasing amount of air causes decrease in the loudness of sound. When air is removed completely from a vessel, it is said that there is a vacuum. If all the air is sucked from the vessel, the sound would stop completely. The sound cannot travel through a vacuum.

21. The metal object which is to be electroplated is fixed in an electroplating chamber at the cathode. The metal that is to be coated is made the anode. The chamber is then filled with an electrolyte which is generally the salt of the metal to be plated.
22. Since the angle of incidence = angle of reflection. So, angle of incidence = 30^o



Section C

23. Rabi crops

    Rabi crops need a cold winter climate to grow.

    Rabi crops are sown at the beginning of winter, in the month of October or November, and harvested in April. Wheat, oat, gram, pea and mustard are some rabi crops.

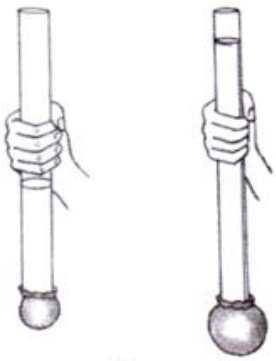
    Kharif crops

    Kharif crops need a warm, wet climate to grow.

    Kharif crops are sown at the beginning of the monsoon season and harvested by the middle of October.

    Paddy (rice), corn, beans, sugar cane and groundnut are kharif crops.
24. Petroleum is known as Black Gold.

    Petroleum is also known as Black Gold - because when crude oil is extracted from the land it is black in color. People call it gold because of its oils and value . It is very difficult to find. So it is called Black Gold.
25. The umbilical cord connects the foetus with the placenta. It also connects the foetus with the circulatory system of the mother. The placenta is attached to the wall of the uterus and is richly supplied with blood vessels. This connection supplies the foetus with oxygen and nutrients from the mother. It also takes away carbon dioxide and other waste products from the foetal blood into the mother's circulatory system.
26. Adrenal gland releases adrenaline that helps the body respond to emergency situations. Thyroid gland releases thyroxine that regulates body temperature and plays an important role in growth and development.
27. Take a transparent glass tube or plastic pipe. Also take piece of thin sheet of a good quality rubber. Stretch the rubber sheet tightly over one end of pipe. Hold the pipe at the known as middle, keeping it in a vertical position. Pour some water in the pipe. Note the height of the water column in the pipe. Pour some more water. Observe, the bulge in rubber lay when sheet and height of water column in the pipe. Repeat this process a few more times. You observe that as the height of water column to the increases the bulge in the rubber sheet also increases.



Pressure exerted by water at the bottom of the container depends on the height of its column.

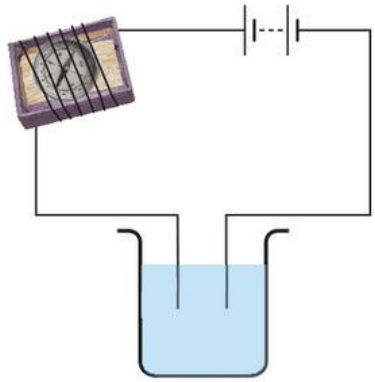
    We conclude that:

    i. A liquid exerts pressure on the bottom of its container.
    ii. The pressure exerted by a liquid depends on the height of the liquid column.
28. The range of human ear is between **20Hz to 20000Hz**.

    The sound frequency between this range is called **audible sound**.

    The sounds having frequency less than 20 Hz is known as **inaudible sounds.**
29. When current flows in a wire, a compass needle kept nearby gets deflected. Even if the current is small, the deflection of the magnetic needle can be seen. We can use the magnetic effect of current to make another tester. For this, take a cardboard tray from inside a discarded matchbox. Wrap an electric wire a few times around the cardboard tray. Place a small compass needle inside it. Now connect one free end of the wire to a termina of a two cell battery. From the other terminal of the battery, connect another

wire. Your tester with two free ends of wire is ready.



30. During a thunderstorm, the movement in the cloud causes the charges in the water molecules to separate. The positive charges concentrate at the upper regions of the clouds and the negative charges concentrate on the base of the clouds. The negative charges at the base of the clouds repel the negative charges from the ground.
31. The drinking straw is a thin pipe used for drinking cold drinks. It works on the principle of the atmospheric pressure. The lower end of the straw is inside the liquid, so when we suck at the upper end with our mouth, the pressure inside the straw and in our mouth is decreased. But the pressure exerted at the surface is greater which pushes the liquid up and it comes inside our mouth.

Section D

32. Asexual reproduction is a mode of reproduction in which the new offspring are produced from a single parent. The offspring produced are identical to each other, both physically as well as genetically. They are the exact copies of their parent cell. Hence, they are called clones. Asexual reproduction is observed in both unicellular and multicellular organisms.
    (i) By budding: Some organisms develop buds on their body. These buds develop into a new individual. This is called budding. An example is a hydra. From the parent hydra, a bud arises which eventually matures into a new hydra. Once it is matured, it detaches from the parent body.
    (ii) By binary fission: In binary fission, parent cell divides into two equal halves called daughter cells. Daughter cells are identical to each other and to their parent cell. Organisms like amoeba, bacteria, euglena, etc., exhibit binary fission.
    (iii) By vegetative reproduction: Plants reproduce asexually through their vegetative parts such as leaves, roots, stem, and buds. This is called vegetative propagation. For example, onion bulbs, tubers of potato, runners/stolon, etc.Vegetative propagation is much faster than the sexual reproduction in plants. This can be done artificially as well, which is widely employed in horticulture.
33. Light rays enter the eye and are bent as they pass through the cornea, aqueous humour and vitreous humour. The ciliary muscles change the shape of the lens to focus an inverted image on to the retina. The sharpest image is formed at the fovea. The light-sensitive rod and cone cells are densely packed in this part of the retina. Rods regulate vision in dim light and cones regulate colour vision. The cone cells contain coloured pigments that absorb colours of light. This causes chemical changes in the pigments and releases some energy. This energy is turned into an electrical impulse and is carried by the optic nerve to the brain. The brain analyses the impulse and this is how we see.
34. A sodium chloride solution which is a strong electrolyte which contains only ions. So more electricity is conducted and bulb glows brightly.
    B is an acetic acid which contains both ions and molecules that are less number of ions. So less electricity is conducted and bulb glows dimly.
    C is sugar solution which is a non-electrolyte that's why it does not contain ions so electricity is not conducted and the bulb does not glow.