Indian School Al Wadi Al Kabir
Final Examination (2025-2026)

Class: VIII	Subject: SCIENCE	Max. marks: 80
Date: 05/03/2026	Set- I	Time: 2 ½ Hours

General Instructions:

i. All questions are compulsory. Marks are indicated against each section.
ii. The question paper comprises 10 ***pages*** *and* ***39*** *questions in 5 sections: A, B, C, D and E.*
iii. Q 1 to Q 16 in ***section A*** *-MCQ carry ONE mark each. Write the correct answer along with the option only in the answer script.*
iv. Q 17 to Q 20 in ***section A*** *-Assertion and Reason carry ONE mark each.*
v. Q 21 to Q 26 in ***section B*** *are short Answer Type Questions and carry TWO marks each.*
vi. Q 27 to Q 33 in ***section C*** *are short-answer type questions that carry THREE marks each.*
vii. Q 34 to Q 36 in ***section D*** *are Long Answer Type Questions and carry FIVE marks each.*
viii. Q 37 to Q 39 in ***section E*** *Case study/Paragraph questions carry FOUR marks each.*
ix. Write the same question number as the one given in the question paper.
x. Correction fluid should not be used in the answer script.
xi. Diagrams should be drawn using a pencil.

SECTION A (20X1=20)

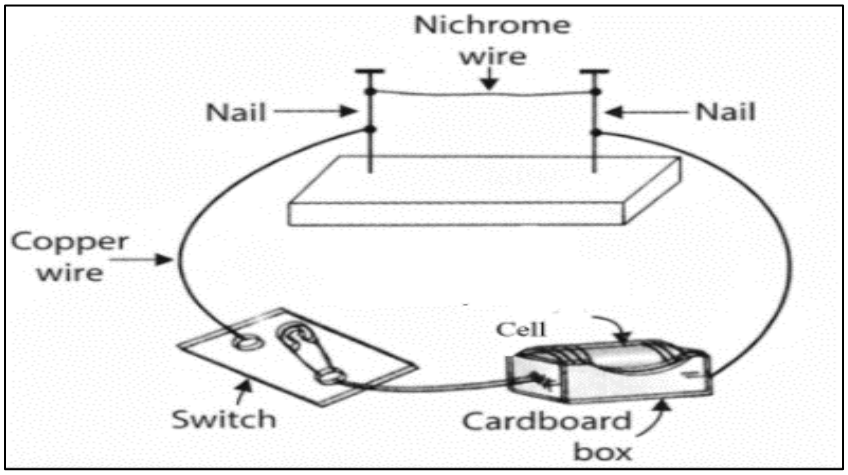
1. A designer rotates an instrument containing mirrors and small pieces of coloured glass. Each time it is turned, colourful symmetrical patterns are formed, which help the designer create new designs for wallpapers and jewellery. Which instrument is being described?
a) Microscope
b) Kaleidoscope
c) Telescope
d) Periscope

2. Riya bought some mangoes. She could not eat a few of them for some days, but her grandmother made jam out of those mangoes. The mangoes she left spoiled, but the jam did not spoil for a long time. Why?
a) Jam has more water than fresh mangoes
b) Jam contains sugar that prevents microbial growth
c) Jam is exposed to air for a longer time
d) Jam does not spoil because the fruit becomes solid after cooking

3. A patient with malaria is admitted to the hospital. The doctor explains that the disease is caused by a parasite transmitted by a carrier insect. Which of the following is responsible for spreading malaria?

a) Female Anopheles mosquito
b) Male Anopheles mosquito
c) Male Aedes mosquito
d) Female Aedes mosquito

4. A nichrome wire becomes warm when an electric current passes through it. What is the main reason for this?



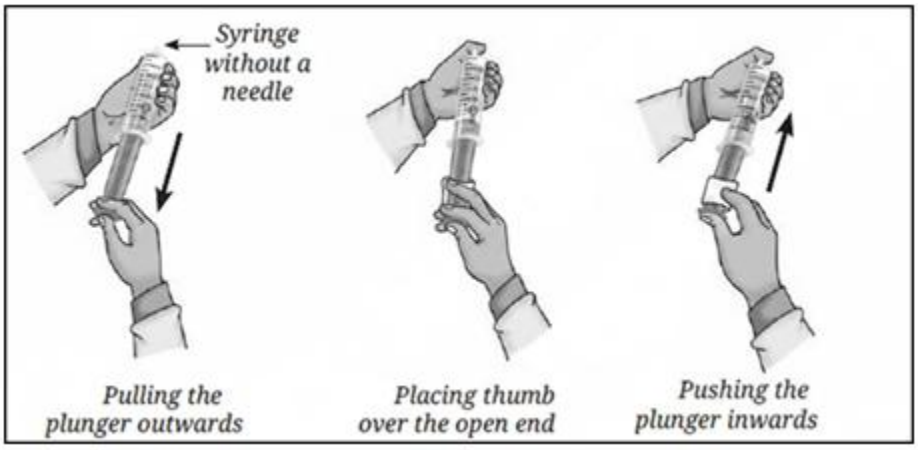
a) Nichrome allows electric current to pass very easily
b) Nichrome converts electrical energy directly into light energy
c) Nichrome has the same resistance as a copper wire of the same size
d) Nichrome offers high resistance, causing electrical energy to convert into heat

5. The table given below shows the melting points of three substances:

Sl. No.	Material	Melting Point
1	Ice	0 °C
2	Urea	133 °C
3	Iron	1538 °C

Based on the melting points, which of the following statements is correct regarding the strength of interparticle forces in these solids?
a) All have equal interparticle forces
b) Ice has the strongest interparticle forces
c) Iron has the strongest interparticle forces among the three
d) Urea has stronger forces than iron

6. When a student pushes the plunger of a syringe filled with air inward, the volume of air decreases. What does this observation tell us about gas particles?



a) Gas particles are tightly packed with no space between them
b) Gas particles have a lot of space between them, which can be compressed
c) Gas particles are fixed in their positions
d) Gas particles cannot be compressed at all

7. Which gas turns lime water milky?
a) Oxygen
b) Hydrogen
c) Nitrogen
d) Carbon dioxide

8. Bronze is an alloy made up of:
a) Copper and zinc
b) Copper and tin
c) Iron and carbon
d) Iron and nickel

9. A pond is full of cold water in winter and supports many fish because it contains enough dissolved oxygen. In summer, the water warms up, and some oxygen escapes. What is the reason for this change?
a) Solubility of gases decreases with an increase in temperature
b) Solubility of gases decreases with a decrease in temperature
c) Solubility of gases decreases with an increase in pressure
d) Stirring causes gases to escape

10. During a science experiment, a student collects a sample of air in a sealed container. She notices that nitrogen makes up the largest portion, while oxygen, carbon dioxide, and other gases are present in smaller amounts. Which gas acts as the solvent in this gaseous solution?
a) Oxygen
b) Carbon dioxide
c) Nitrogen
d) Oxygen and nitrogen together

11. Makar Sankranti is celebrated according to which type of calendar?
a) Lunar calendar
b) Luni-solar calendar
c) Solar sidereal calendar
d) Gregorian calendar

12. What is observed if you watch the Moon at the same time each night?
a) It stays in the same position every day
b) It rises about 50 minutes later each day
c) It grows bigger every night
d) It shines with its own light

13. In a park, you see several squirrels of the same species living together. This group of squirrels is called a:
a) Community
b) Population
c) Ecosystem
d) Habitat

14. Which of the following is an example of mutualism?
a) Tick on a dog
b) Orchids growing on tree branches
c) Honeybees collecting nectar from flowers
d) A mosquito biting a human

15. A group of scientists observed that charged particles coming from the Sun are deflected away from Earth before they reach the atmosphere. This natural shield helps protect life by preventing damage to the atmosphere and living cells.
a) Ozone layer
b) Clouds
c) Gravity
d) Magnetic field

16. A planet is discovered at a distance from its star where water remains mostly in liquid form. Scientists call this region the habitable zone. Why is being in the habitable zone important for life?

a) It ensures the planet has a thick atmosphere.

b) It keeps the planet's temperature just right for liquid water.

c) It prevents harmful UV rays from reaching the surface.

d) It guarantees the planet has oxygen.

For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii), and (iv) as given below.

i) Both A and R are true, and R is the correct explanation of the assertion.

ii) Both A and R are true, but R is not the correct explanation of the assertion.

iii) A is true, but R is false.

iv) A is false, but R is true

17. **Assertion (A):** Graphene aerogel can be used as an environmental cleaner.

    Reason (R): It is highly porous and has high absorbing capacity.

18. **Assertion(A):** Materials become more compact as we move towards the centre of the Earth.

    Reason(R): The decreasing pressure and temperature inside the Earth cause the particles of matter to move closer together.

19. **Assertion (A):** Lunar eclipses happen every month.

    Reason (R): The moon takes about 29.5 days to complete one cycle of phases.

20. **Assertion (A):** Earth's gravity is strong enough to hold its atmosphere.

    Reason (R): If Earth were much smaller, its gravity would be too weak, and gases would escape into space.

SECTION B (6X2=12)

21. What is a vaccine, and how does it work?

22. a) A child is prescribed antibiotics for a bacterial infection. His elder brother reminds him to take the medicine carefully. Suggest any two precautions he should follow while taking antibiotics to ensure they work effectively.

    b) Why do farmers prefer to grow beans and peas in nitrogen-deficient soils?

23. a) When electricity is passed through water containing a few drops of dilute sulfuric acid, two gases are produced. Name the two gases produced when electricity is passed through water.

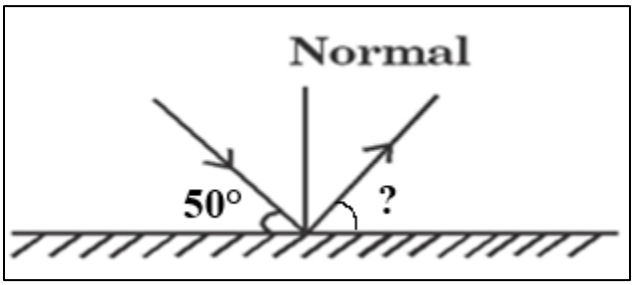
    b) A black sheet of paper was kept near an open window for a few hours. Tiny particles settled on it. What does this activity show?

24. Draw a neat and labelled diagram showing the corresponding phases of the Moon as seen from the Earth.

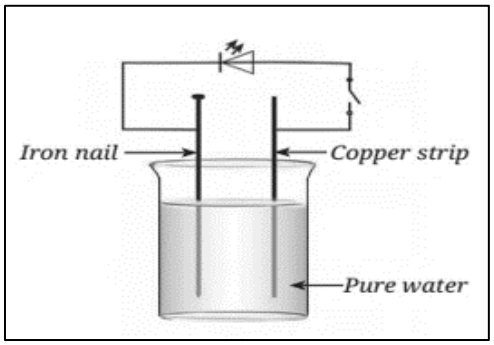
25. Describe how the mass of a stone can be measured using a digital weighing balance.
26. a) State any one difference between asexual and sexual reproduction
    b) Draw a neat and labelled diagram showing the fertilisation of the human egg and zygote formation.

SECTION C (7X3=21)

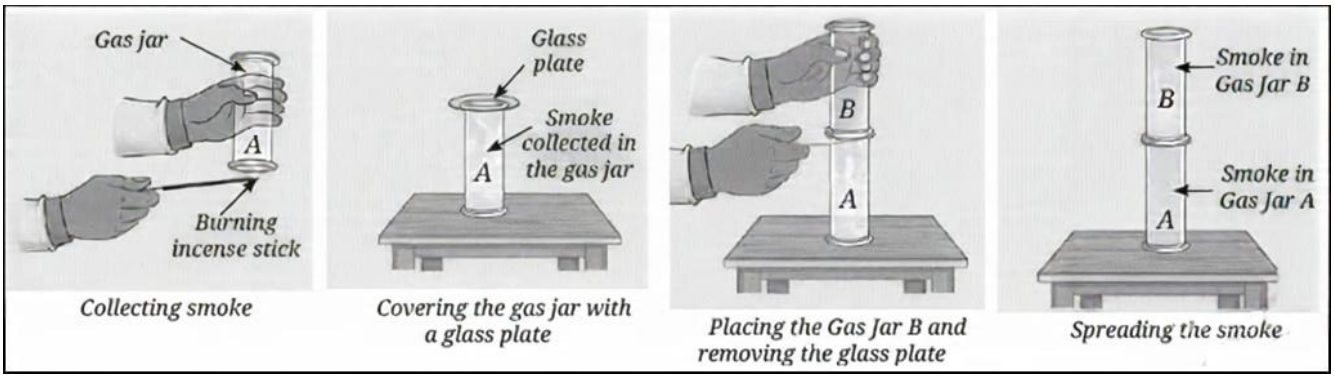
27. a) A student stands in front of a plane mirror and observes his image. Describe any two characteristics of the image formed by a plane mirror.
    b) After a rain shower, we observe a rainbow in the sky. Explain how a rainbow is formed.
    c) An incident ray strikes a plane mirror such that the angle between the incident ray and the mirror surface is 50°. Find the angle of reflection.



28. a) State the role of yeast in the baking industry.
    b) Rahul has a common cold. While sneezing, he does not cover his nose and mouth. Explain why this is not advisable.
    c) Why are viruses called borderline organisms between living and non-living things?
29. a) Mention any two safety precautions to be followed while performing experiments with electric current.
    b) Do electromagnets have poles like permanent magnets? If yes, can their poles be reversed? How?
    c) Why does the LED not glow in the given circuit when the switch is closed?



30. Anu performed an experiment with two gas jars. She trapped smoke in Gas Jar A and covered it with a glass plate. Then she placed an empty Gas Jar B over it. After some time, she removed the glass plate and noticed that the smoke spread and filled Gas Jar B completely.



. a) What property of gases is shown when the smoke spreads and fills Gas Jar B?
b) Draw a diagram showing the arrangement of particles in gases.
c) Why do we consider gases as fluids?

31. a) Riya took a glass tumbler half-filled with water. She added two teaspoons of sugar to it, stirred the water, and observed that the water level decreased slightly. Then she repeated the experiment with sand instead of sugar.
i) Why did the water level decrease when sugar dissolved in water?
ii) What happens when sand is added to water instead of sugar?
b) Why does a crystal of potassium permanganate spread quickly in hot water but slowly in cold water?

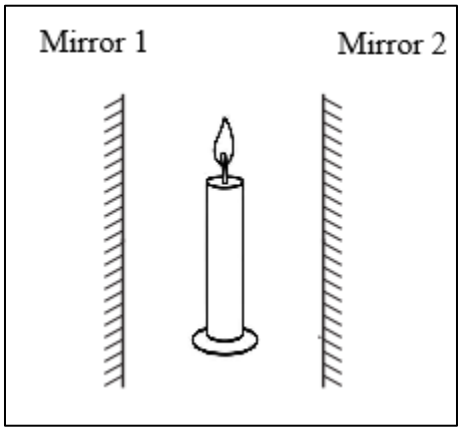
32. a) Explain why heating the air inside a hot air balloon causes it to rise.
b) An object has a mass of 200 g and a volume of 10 cm^3. What is its density?
33. a) Mention any two uses of artificial satellites.
b) Explain the need for intercalary months in luni-solar calendars.
c) What is meant by tropical year?

SECTION D (3X5=15)

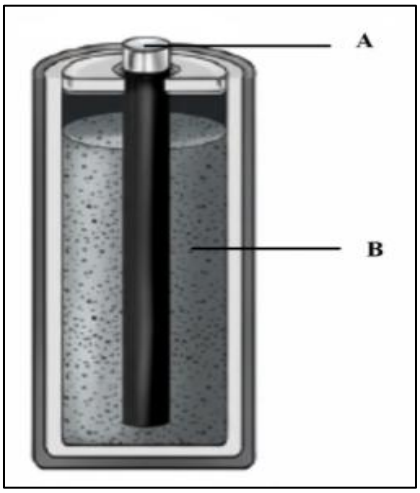
34. a) An elderly person finds that his eyesight has become foggy, making it difficult to see clearly. A doctor examines him and says that his eye lens has become cloudy. Name the eye defect described. How is it treated?
b) Owls are active at night. Which feature of their eyes helps them see in dim light?

c) A beam of light strikes different surfaces. For each of the following, state whether regular reflection or diffused reflection will occur. Justify your answer.
(i) Polished wooden table
(ii) Cardboard surface

d) A candle is placed between two parallel plane mirrors. How many images of the candle will be formed?



35. a) Identify the parts marked as A and B in the given diagram of a dry cell.



b) Electric heating devices, like an electric heater or stove, are often used instead of burning firewood or charcoal. Give a reason why this is considered more convenient, considering its impact on society.

c) What is the advantage of a rechargeable battery over a dry cell?

d) Ravi made an electromagnet by winding a wire around an iron nail and connecting it to a battery. He noticed that it could lift only a few iron pins. He wants to increase the strength of his electromagnet. State any two ways by which Ravi can increase the strength of the electromagnet.

36. a) Draw a food chain from any ecosystem.
    b) How can changes in the fish population of a pond influence the seed production of nearby plants?
    c) If decomposers like bacteria and fungi did not exist on Earth, what would happen to dead plants and animals, and how would it affect the environment?

SECTION E (3X4=12)

Read the passage and answer the following questions.

37. **Aarav was cleaning his table in the laboratory when he accidentally spilled iron filings and sulfur powder on a watch glass. Curious, he decided to mix them lightly and labelled it Mixture Iron-Sulfur. He noticed that the mixture looked non-uniform, with tiny specks of iron and yellow sulfur clearly visible. He brought a magnet near the mixture, and the iron filings were attracted, leaving the sulfur behind. Aarav realised that this mixture still retained the individual properties of its components and that the iron could be separated physically using a magnet, as it is magnetic in nature. This confirmed that the substance was a mixture and not a compound. To explore further, he added a few drops of dilute hydrochloric acid. A colourless gas bubbled out. Aarav carefully brought a burning matchstick near the gas, and a 'pop' sound was heard, confirming that the gas was hydrogen.**

i) Why did the magnet attract the iron filings in the mixture?
ii) How was it confirmed that the gas released was hydrogen?
iii) Give any two reasons why the iron-sulfur mixture is classified as a mixture and not as a compound.

38. **In a coastal village, a dense mangrove forest grew along the shoreline. The mangrove trees protected the village from strong waves and storms. Their strong roots held the soil firmly, preventing erosion. These roots provided a safe habitat for fish and crabs, and the trees offered nesting sites for birds. Over time, some parts of the mangrove were cut for timber and construction. After this, flooding during storms increased, fewer fish were caught, and some bird species disappeared. The villagers realised that mangrove trees, soil, water, and animals are all connected. To restore the balance, people began planting new mangrove saplings, avoided cutting the remaining trees, and protected the water and soil from pollution.**

i) What role do mangrove forests play in protecting coastal areas?
ii) How do mangroves provide support to birds and animals living in the coastal area?
iii) What problems did the villagers notice when some mangroves were cut down?

39. **A group of people visited Hillside Valley. They noticed tall hills, deep valleys, rivers, and patches of forest. This variety of landforms, rocks, and soils is called geodiversity. It helps create unique habitats where different types of life can thrive. The river in the valley provides water for plants, animals, and crops. Life in the valley depends on a balance between air, water, soil, and living organisms. Cutting down forests, polluting rivers, or disturbing soil can upset this balance. If the river dries up or gets polluted, plants and crops would suffer, animals may die or move away, and the ecosystem would become unbalanced. People can plant more trees, keep the river clean, and take care of the soil to protect life in the valley.**

i) What is meant by geodiversity?

ii) What could happen to the valley's ecosystem if the river dries up or gets polluted?

iii) Suggest two actions to protect life in the valley.