



SCHOOL ACADEMIC RESOURCE

Academic Year & Term	2026-27 TERM 1
Class	VII
Subject	GENERAL SCIENCE
Topic/Chapter	MIDTERM WORKSHEET
Section [KG/Middle/Secondary etc..]	MIDDLE
Date of Issue	SEPTEMBER 2026

L- 2- EXPLORING SUBSTANCES: ACIDIC, BASIC AND NEUTRAL

I. FILL IN THE BLANKS

1. Substances that feel soapy to touch and turn red litmus blue are called _____.
2. The acid present in tamarind is _____ acid.
3. Turmeric turns _____ when added to baking soda solution
4. When blue litmus is dipped in an acidic solution, it turns _____.
5. _____ is a mineral acid commonly used in laboratories.

II. CHOOSE THE CORRECT ANSWER

1. Which of the following is acidic in nature?
a. Vinegar b. Soap solution c. Baking soda d. Sugar solution
2. Which type of substance turns red rose extract red?
a. Neutral b. Basic c. Acidic d. Salty
3. Which of the following substances turns red litmus paper blue?
a. Vinegar b. Lemon juice c. Detergent solution d. Orange juice
4. Which of the following natural indicators is obtained from lichens?
a. Salt b. Base c. Litmus d. Acid
5. Which of the following substances is an example of an olfactory indicator?
a. Soap solution b. Vinegar c. Vanilla extract d. Litmus

III. NAME THE FOLLOWING

1. The solution formed when calcium oxide is dissolved in water.

2. The golden-yellow spice commonly used in traditional home remedies.
3. The scientist known as the Father of Modern Indian Chemistry.
4. Reaction between acid and base.
5. The substance that can be used to relieve the effects of an ant bite.

L- 3- ELECTRICITY: CIRCUITS AND THEIR COMPONENTS

I. FILL IN THE BLANKS

1. A _____ provides electrical energy to a simple electric circuit.
2. The conventional direction of electric current in a circuit is from the _____ terminal to the _____ terminal of an electric cell.
3. The _____ terminal of a cell is represented by the longer line in its symbol.
4. The main function of a bulb in an electric circuit is to convert _____ energy into _____ energy.
5. Electrical components in a circuit diagram are represented using standard _____.

II. CHOOSE THE CORRECT ANSWER

1. Which of the following conditions allows electric current to flow through a circuit?
(a) Open Switch (b) Broken Wire (c) Closed Switch (d) Plastic Strip
2. Which of the following materials allows electric current to pass through it easily?
(a) Rubber (b) Plastic (c) Copper (d) Glass
3. What is the name of the device used to check whether a material conducts electricity?
(a) Motor (b) Tester (c) Generator (d) Magnet
4. The longer leg of an LED is connected to the _____ terminal of the cell.
(a) Negative (b) Bulb (c) Positive (d) Switch
5. Which of the following forms a complete electric circuit?
(a) A single battery (b) A bulb alone
(c) A loose wire (d) A battery, bulb, and wires connected in a closed path

III. NAME THE FOLLOWING

1. A device used to open or close an electric circuit.
2. The glowing thin wire in an incandescent lamp.
3. Materials that allow electric current to pass through them.

L- 5 - CHANGES AROUND US - PHYSICAL AND CHEMICAL

I. FILL IN THE BLANKS

1. A _____ change results in the formation of a new substance with different properties.
2. The movement of soil, sediments, and rock pebbles from one location to another by wind and _____ is called _____.
3. The three essential requirements for combustion are _____, _____, and _____.
4. _____ or _____ are given out during combustion.
5. New substances are produced during a chemical change through a _____.

II. NAME THE FOLLOWING

1. The production of light by living organisms without heat.
2. The physical and chemical processes that break down rocks and help in the formation of soil.
3. The scientist who gave the famous lecture series 'The Chemical History of a Candle.'
4. The brownish coating that forms on iron when it is exposed to air and moisture.
5. The lowest temperature at which a substance catches fire.

III. CHOOSE THE CORRECT ANSWER

1. Passing carbon dioxide through limewater produces _____, which makes the limewater milky.
a) Calcium hydroxide b) Calcium carbonate c) Sodium carbonate
2. Shape, size, and state are examples of _____ properties of a substance.
a) Physical b) Chemical c) Magnetic
3. A _____ change is irreversible and permanent.
a) Physical b) Chemical c) Temporary change
4. Burning more fuels in vehicles increases the amount of _____ in the atmosphere.
a) Oxygen b) Carbon dioxide c) Nitrogen

IV. GIVE THE CHEMICAL NAME OF

- | | |
|----------------|---------------|
| 1. Baking soda | 3. Rust |
| 2. Vinegar | 4. Lime water |

V. COMPLETE THE EQUATIONS

1. Magnesium + _____ → Magnesium oxide + _____ + _____.
2. Vinegar + Baking soda → _____ + other substances

VI. CLASSIFY THE FOLLOWING AS PHYSICAL OR CHEMICAL CHANGES.

- | | |
|---------------------------|------------------------------|
| 1. Condensation of water. | 5. Digestion of food |
| 2. Melting of wax | 6. Cutting of wood |
| 3. Burning paper | 7. Souring milk |
| 4. Crushing a can | 8. Bursting of a firecracker |

L- 7 - HEAT TRANSFER IN NATURE

I. CHOOSE THE CORRECT ANSWER

- Why are hollow bricks preferred for constructing houses in hot regions?
(a) They are cheaper (b) They contain air which is a poor conductor of heat
(c) They are heavy (d) They produce heat
- During the day, wind blows from the sea towards the land. This is called
(a) Sea breeze (b) Radiation (c) Conduction (d) Land breeze
- Why are the handles of metal utensils often made of plastic or wood?
(a) They look good (b) Plastic and wood are poor conductors of heat
(c) Plastic is stronger than metal (d) Wood melts easily
- A student has two umbrellas, one black and one white. Which umbrella would be more suitable for a hot, sunny day?
(a) Black umbrella, because it absorbs more heat (b) White umbrella, because it reflects more heat
(c) Black umbrella, because it reflects more heat (d) Both absorb the same amount of heat

II. FILL IN THE BLANKS

- In solids, heat is mainly transferred by _____.
- Underground layers of rocks that store groundwater are called _____.
- The transfer of heat through the actual movement of particles is called _____.
- Dark-coloured clothes _____ more heat.
- Soil heats _____ than water.

III. NAME THE FOLLOWING

- The transfer of heat that does not require a medium.
- The process by which surface water seeps into soil.
- A tall, cone-shaped structure formed when ice builds up layer by layer.

4. The process by which water vapour changes into tiny water droplets to form clouds.
5. Materials that do not allow heat to pass easily.

L- 10 - LIFE PROCESSES IN PLANTS

I. CHOOSE THE CORRECT ANSWER

1. Water transport in plants occurs through
 - a) Phloem b) Xylem c) Root hair d) Chlorophyll
2. Which pigment gives leaves their characteristic green colour?
 - a) Xylem b) Chlorophyll c) Phloem d) Stomata
3. Which gas is released by green plants during photosynthesis?
 - a) Oxygen b) Nitrogen c) Carbon dioxide d) Hydrogen

II. NAME THE FOLLOWING

1. The process by which energy is released from food.
2. The process that helps cool the plant and assists in the upward movement of water.
3. The food produced by green plants during photosynthesis.
4. The main organ where photosynthesis takes place in plants.
5. The Indian plant scientist who studied the effects of water, temperature, and light colour on photosynthesis

III. FILL IN THE BLANKS

1. Carbon dioxide enters leaves through _____.
2. Plants store food mainly in the form of _____.
3. During photosynthesis, _____ energy from the Sun is converted into _____ energy.
4. The gas released during respiration is _____.
5. Plants store extra food in roots, stems, _____ and _____.

ASSERTION AND REASON

Use the following key to choose the appropriate answer.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true, but R is false.
- (d) A is false, but R is true

1. Assertion (A): Photosynthesis occurs in green parts of the plant.
Reason (R): Green parts contain chlorophyll.
2. Assertion (A): Plants respire during both day and night.
Reason (R): Respiration is necessary to release energy from food for life activities.
3. Assertion (A): All salts are neutral in nature.
Reason (R): Salts are formed from the neutralization of acids and bases.
4. Assertion (A): Sugar is a neutral substance.
Reason (R): A sugar solution turns red litmus blue.
5. Assertion (A): Plastic is used to make the outer covering of electric wires.
Reason (R): Plastic is a good conductor of electricity.
6. Assertion (A): A switch is used to control the flow of current in a circuit.
Reason (R): A switch can open or close a circuit.
7. Assertion (A): Rusting of iron is a desirable change.
Reason (R): Rusting of iron is a chemical change.
8. Assertion (A): Synthetic blanket or cloth should not be used to put out fire.
Reason (R): While wrapping, they melt and stick to the skin.
9. Assertion (A): In coastal areas, windows of houses are often designed to face the sea.
Reason (R): During the night, cooler air moves from the sea towards the land, providing relief from the heat through a process called sea breeze.
10. Assertion (A): Hot air rises up in the atmosphere.
Reason (R): Hot air is heavier than cold air.

CASE STUDY

1. Rohit was helping his mother in the kitchen when she accidentally spilled some lemon juice on the marble kitchen slab. After a few minutes, they noticed that the marble surface had become dull where the juice had fallen. Rohit's mother explained that lemon juice contains an acid called citric acid, and marble contains calcium carbonate. The acid reacted with the marble, leading to its dullness. Curious, Rohit decided to test other kitchen substances using turmeric paper. He prepared turmeric strips and tested vinegar, baking soda solution, soap solution, and curd.

1. Which substances tested by Rohit are acidic and which are basic?

2. Rohit observed that turmeric paper turned reddish-brown with baking soda solution. What

does this tell you about baking soda?

3. If Rohit had used litmus paper instead of turmeric paper, what would he observe when

testing vinegar and soap solution?

2. Rahul connected a bulb, a battery, and wires to make a circuit. The bulb did not glow. On checking, he found that one wire was not connected properly. Riya connected two cells in series to a bulb. The bulb glowed brighter than when only one cell was used.

1. What is meant by closed circuit?

2. What happens when the circuit is incomplete?

3. What is a battery?

4. Name one device that uses multiple cells.

3. Sumi placed two identical candles on two separate petri dishes and lighted both. Then she covered one of them with a glass tumbler. It was observed that the candle that was not covered continued to burn whereas the other stopped burning after some time. Then she added a small amount of limewater to the petri dish that was covered with a glass tumbler and was surprised to see that it turned milky.

1. The component of air that supports combustion is _____.

2. Milky substance formed in the petri dish is _____.

3. How was carbon dioxide formed inside the glass tumbler inverted over the candle?

4. Write the word equation for the reaction in the covered Petri dish.

4. A thermos flask (vacuum flask) is designed to keep hot liquids hot and cold liquids cold for a long time. It consists of a double-walled glass or stainless-steel vessel with a vacuum between the walls. This vacuum is the most important part of the design because it contains no air particles. Additionally, the inner surfaces of the walls are often silvered (shiny). The flask is closed with a tight-fitting stopper made of an insulating material like plastic or cork. By combining these features, the flask minimizes the transfer of heat energy between the contents and the external environment.

1. Conduction and convection cannot occur in _____.

2. Heat always flows from _____ object to _____ object.

3. Why does a thermos flask have a vacuum between its walls?

4. Why are the inner walls of a thermos flask made shiny or silvered?

5. A plant was carefully uprooted from the soil, but many of its roots were damaged during the process. Roots are very important because they help the plant absorb water and minerals from the soil. On the surface of roots there are tiny structures called root hairs that help in absorbing water. When the plant was pulled out, many of these delicate structures were destroyed. Even though the plant still received sunlight and carbon dioxide from the environment, it could not take in enough water from the soil. Due to the lack of water, the plant slowly began to wilt and dry out. Eventually, the plant died because it could not get the water it needed.

1. Which tiny structures present on roots help the plant absorb water from the soil?
2. Why did the plant dry even though it received sunlight?
3. Which life process was affected first due to root damage?
4. Which tissue normally carries water and minerals from roots to leaves?

**NOTE: REFER TO THE TEXTBOOK AND ALL NOTES & WORKSHEETS OF TERM 1
DISCUSSED AND UPLOADED IN GOOGLE CLASSROOM**