



SCHOOL ACADEMIC RESOURCE

Academic Year & Term	2026-27 TERM 1
Class	VIII
Subject	GENERAL SCIENCE
Topic/Chapter	MIDTERM WORKSHEET
Section [KG/Middle/Secondary etc.]	MIDDLE
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L-2: THE INVISIBLE LIVING WORLD: BEYOND OUR NAKED EYE

I. MULTIPLE CHOICE QUESTIONS:

- Which of the following organisms consists of only a single cell?
(a) Hydra (b) Bacteria (c) Mushroom (d) Cat
- Which microorganism is responsible for converting milk into curd and is also used in food fermentation?
(a) Lactobacillus (b) Rhizobium (c) Spirulina (d) Diatoms
- Paramecium is classified under which group of organisms?
(a) Bacteria (b) Virus (c) Fungus (d) Protozoa
- Which stain is commonly used to give a red colour to cell parts while preparing a slide for observation?
(a) Iodine (b) Methylene blue (c) Safranin (d) Glycerin
- Spirulina is a good source of:
(a) Vitamin A (b) Vitamin K (c) Vitamin D (d) Vitamin B12

II. FILL IN THE BLANKS:

- _____ is known as the Father of Microbiology.
- _____ is an Irregularly shaped moving protozoan.
- Biogas is a mixture of _____ and _____.
- The _____ is considered the largest known cell in the living world.
- _____ are microscopic organisms that do not have a cellular structure.

III. NAME THE FOLLOWING:

- The name of the famous book written by Robert Hooke containing detailed drawings of microscopic objects.
- Empty looking space inside the cell.
- The green-coloured plastids in plant cells that contain chlorophyll.
- Who developed a special bacterium that could help clean the environment by breaking down oil spills?
- The bacteria that can fix nitrogen from the air and convert it into a form useful to plants.

IV. ASSERTION–REASON:

Choose the correct option:

- (a) Both Assertion (A) and Reason (R) are true, and Reason (R) is the correct explanation of Assertion (A).
 - (b) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).
 - (c) Assertion (A) is true, but Reason (R) is false.
 - (d) Assertion (A) is false, but Reason (R) is true.
1. Assertion (A): Animal cells differ from one another in their shape and structure.
Reason (R): The shape and structure of a cell are related to its function.
 2. Assertion (A): All microorganisms have cells that are surrounded by a cell wall.
Reason (R): Fungal cells do not contain chloroplasts.

V. CASE STUDY:

Microorganisms are tiny organisms that cannot be seen with the unaided eye. They can survive in a wide variety of environments and may also live in the bodies of plants and animals. They can be observed only with the help of a microscope.

Some microorganisms are unicellular, meaning that a single cell performs all the functions necessary for their survival. The major groups of microorganisms include bacteria, fungi, and protozoa. Viruses are different from these microorganisms because they can reproduce only inside the cells of a host organism.

Microorganisms can be beneficial as well as harmful to humans. Some microorganisms have a cell wall, while others do not. Bacteria do not have a well-defined nucleus or a nuclear membrane.

1. Name one unicellular fungus and one multicellular fungus.
2. What is the name given to the region in a bacterial cell where the genetic material is present but is not enclosed by a nuclear membrane?
3. Which instrument is used to observe microorganisms that cannot be seen clearly with a light microscope?
4. What feature of bacteria distinguishes them from the cells of fungi, protozoa, and algae?

L-3: HEALTH -THE ULTIMATE TREASURE

I. MULTIPLE CHOICE QUESTIONS:

1. Malaria is caused by:
(a) Bacteria (b) Virus (c) Worms (d) Protozoa
2. Which of the following is an example of a communicable disease?
(a) Diabetes (b) Cancer (c) Typhoid (d) Asthma
3. Which disease is transmitted by a Mosquito?
(a) Cholera (b) Tuberculosis (c) Dengue (d) Typhoid
4. What is the main mode of transmission of malaria?
(a) Air (b) Water (c) Mosquito (d) Food
5. Which of the following is a non-communicable disease?
(a) Measles (b) Flu (c) Hypertension (d) Chickenpox

II. FILL IN THE BLANKS:

1. The _____ helps us know how clean the air is.
2. Organisms that cause diseases are known as _____.
3. The first antibiotic discovered and used was _____.
4. The body's natural ability to protect itself from diseases is called _____.
5. _____ train the immune system to protect the body from specific diseases.

III. NAME THE FOLLOWING:

1. What do we call bacteria that are able to survive antibiotics that previously killed them?
2. Which was the first vaccine developed to protect humans against a disease?
3. Who developed the first vaccine?
4. Which bacterial disease primarily affects the lungs?
5. What are insects or other organisms that transmit diseases from one person or animal to another called?

IV. ASSERTION–REASON:

1. Assertion (A): A person who has a fever does not necessarily have an infectious disease.
Reason (R): Fever can be a sign of an infection.
2. Assertion (A): All communicable diseases are caused by pathogens.
Reason (R): Pathogens include bacteria, viruses, protozoa, and worms.

V. CASE STUDY:

There was an outbreak of flu in a school. Some students continued attending classes even though they were coughing and sneezing. Soon, several other students developed symptoms such as fever and sore throat.

- a) What type of disease is flu, and what is its causal agent?
- b) How can flu be transmitted from one student to another?
- c) What immediate preventive measures should the school take to control the spread of flu?
- d) What steps should a student take to protect themselves while being considerate of classmates who are sick?

L-4: ELECTRICITY-MAGNETIC AND HEATING EFFECTS

I. MULTIPLE CHOICE QUESTIONS:

1. Why is a dry cell referred to as a “dry” cell?
(a) Because it has no electrodes (b) Because its electrolyte is a paste, not a liquid
(c) Because it does not produce electricity (d) Because it can be recharged
2. What role does the zinc container play in a dry cell?
(a) Positive terminal (b) Negative terminal (c) Electrolyte (d) Insulator
3. Which of the following does NOT influence the amount of heat produced by a wire?
(a) Current (b) Resistance (c) Time (d) Colour of the wire

4. What is a major advantage of a dry cell compared with a galvanic cell?
(a) It contains a liquid electrolyte (b) It is portable and does not spill
(c) It can supply a very high current (d) It can be recharged
5. Which terminal of a dry cell is connected to the carbon rod?
(a) Negative terminal (b) Positive terminal (c) Both (d) None

II. FILL IN THE BLANKS:

1. The heating element in devices is usually made of _____ because of its high _____.
2. An electromagnet has _____ poles.
3. The poles of an electromagnet can be reversed by changing the _____ of the current.
4. A freely suspended magnet aligns itself in the North–South direction because the Earth behaves like a _____.
5. Copper act as the _____ electrode in Voltaic cell.

III. NAME THE FOLLOWING:

1. Which scientist discovered the magnetic effect of electricity.
2. Who invented the Voltaic cell, one of the earliest sources of continuous electric current?
3. What is the most commonly used type of rechargeable battery?
4. What are the two main effects produced by an electric current?
5. Which effect of electric current is responsible for the working of electric bells and loudspeakers?

IV. ASSERTION–REASON:

1. Assertion (A): An electromagnet is a temporary magnet.
Reason (R): An electromagnet loses its magnetic effect when the electric current is switched off.
2. Assertion (A): Copper wires are generally not used as heating elements.
Reason (R): Copper has high resistance.

V. CASE STUDY:

In many electrical appliances used in homes and industries, electric current produces different effects. For example, the heating effect of electric current is used in appliances such as electric irons and heaters, where a heating element becomes hot when current passes through it. The magnetic effect of electric current is used in devices such as electric bells and motors, where the current produces a magnetic field. Many of these devices operate using batteries, including rechargeable lithium-ion batteries commonly used in mobile phones and laptops. When batteries and electronic devices are discarded after use, they become electronic waste (e-waste).

Proper recycling of e-waste helps recover useful materials and prevents harmful chemicals from damaging the environment.

1. What is meant by the magnetic effect of electric current?
2. An electric bell and a heater are connected to the same power supply. After some time, the heater becomes hot, but the bell does not. Why?
3. Which material is commonly used to make the heating element of a heater?
4. Why are safety devices such as fuses used in household electrical circuits?

L-5: EXPLORING FORCES

I. MULTIPLE CHOICE QUESTIONS:

1. What is the SI unit used to measure force?
(a) Joule (b) Newton (c) Watt (d) Pascal
2. Which quantity remains constant everywhere?
(a) Weight (b) Mass (c) Gravity (d) Force
3. Which force pulls objects towards the Earth?
(a) Magnetic force (b) Electrostatic force (c) Gravitational force (d) Frictional force
4. Which of the following is an example of a non-contact force?
(a) Friction (b) Muscular force (c) Magnetic force (d) Push
5. What changes can a force produce in an object?
(a) Speed only (b) Shape only (c) Direction only (d) Speed, direction or shape

II. FILL IN THE BLANKS:

1. Forces can act either with or without _____.
2. Magnetic force and electrostatic force can be either _____ or repulsive.
3. The force by which the Earth pulls an object towards itself is called _____ force.
4. The _____ of an object remains unchanged regardless of its location.
5. The _____ of an object indicates how strongly it is pulled by the Earth.

III. NAME THE FOLLOWING:

1. What is the SI unit used to measure weight?
2. What is the term used for the amount of matter present in an object?
3. Which force is always attractive in nature?
4. What is the upward force exerted by a liquid on an object immersed in it called?
5. What is the term for the straight downward motion of an object under the influence of gravitational force?

IV. ASSERTION–REASON:

1. Assertion (A): A force is required to change the speed of a moving object.

Reason (R): A force can change the state of motion of an object.

2. Assertion (A): The weight of an object remains the same at every location.

Reason (R): The weight of an object depends on the gravitational force acting on it.

V. CASE STUDY:

Archimedes, a famous Greek scientist, discovered that when an object is fully or partially immersed in a liquid, it experiences an upward force equal to the weight of the liquid displaced by the object. This is known as Archimedes' Principle. If the weight of the displaced liquid is less than the weight of the object, the object sinks. If the weight of the displaced liquid is equal to the weight of the object, the object floats. The upward force also depends on the density of the liquid. The greater the density of the liquid, the greater the upward force exerted by it.

1. What is meant by upthrust?
2. State Archimedes' Principle.
3. Why do some objects sink in a liquid while others float?
4. An egg sinks in fresh water but floats in salt water. Why?

L-6: PRESSURE, WINDS, STORMS AND CYCLONES

I. MULTIPLE CHOICE QUESTIONS:

1. Air generally moves from an area of:
 - (a) Low pressure to high pressure
 - (b) High pressure to low pressure
 - (c) Equal pressure to unequal pressure
 - (d) Low pressure to a vacuum
2. What is the name given to the calm region at the centre of a cyclone?
 - (a) Vortex
 - (b) Eye
 - (c) Core
 - (d) Funnel
3. Which of the following is essential for a storm to develop into a cyclone?
 - (a) Cold Ocean water
 - (b) Warm, moist ocean water
 - (c) High atmospheric pressure over the sea
 - (d) Dry land conditions
4. What causes lightning during a thunderstorm?
 - (a) Friction between clouds and high-speed winds
 - (b) Expansion of air during rainstorms
 - (c) A sudden discharge of accumulated electric charges
 - (d) Condensation and evaporation cycles
5. Why do cyclones lose their strength quickly after moving over land?
 - (a) The temperature drops too low
 - (b) The atmospheric pressure becomes too high
 - (c) They are deprived of moisture from the warm ocean
 - (d) High-speed winds stop blowing

II. FILL IN THE BLANKS:

1. Compared with cold air, warm air is _____ and therefore rises upward.
2. Air expands on _____.
3. The rotation of the Earth causes winds to _____ around the low-pressure centre of a cyclone.
4. When strong winds blow over a tin roof during a storm, the air pressure above the roof _____, which may cause the roof to be blown away.
5. Wind moves from a region of _____ pressure to a region of _____ pressure.

III. NAME THE FOLLOWING:

1. What is the force exerted on a surface per unit area called?
2. What do we call air that is moving from one place to another?
3. What is the main global phenomenon responsible for the movement of winds on Earth?
4. What type of pressure area is formed when warm air rises and leaves a region?
5. What are severe atmospheric disturbances accompanied by very strong winds and rain called?

IV. ASSERTION–REASON:

1. Assertion (A): A tin roof can be lifted and blown away when high-speed winds pass over it.
Reason (R): High-speed winds create a region of high air pressure above the roof.

2. Assertion (A): The centre of a cyclone is generally calm, with very light winds and little or no rain.

Reason (R): The centre of a cyclone is called the eye, which is a region of very low atmospheric pressure.

V. CASE STUDY:

Megha and her brother Pawan are walking to a picnic spot. Both of them are carrying bags of the same weight. Megha is walking comfortably, whereas Pawan is finding it difficult to carry his bag because it hurts his shoulders. They observe that Megha's bag has broad shoulder straps, while Pawan's bag has narrow straps.

1. What scientific concept is illustrated in this situation?
2. Why does Pawan experience more pain than Megha even though both bags have the same weight?
3. What is the SI unit of pressure?
4. Why do people carrying heavy pots on their heads often place a round piece of cloth beneath the load?

L-7: PARTICULATE NATURE OF MATTER

I. MULTIPLE CHOICE QUESTIONS:

1. In which state of matter are the interparticle forces the weakest?
(a) Gas (b) Liquid (c) Solid (d) Plasma
2. Why are liquids able to flow from one place to another?
(a) Their particles only vibrate in fixed positions. (b) There are no interparticle forces between their particles. (c) Their particles can move freely within a limited space. (d) They do not contain particles.
3. In which state of matter do particles vibrate about their fixed positions?
(a) Gas (b) Liquid (c) Solid (d) Plasma
4. Which of the following substances has negligible interparticle forces?
(a) Ice (b) Water (c) Oxygen gas (d) Rock salt
5. What is the temperature at which a solid change into a liquid called?
(a) Boiling point (b) Freezing point (c) Melting point (d) Condensation point

II. FILL IN THE BLANKS:

1. Particles move the fastest in _____.
2. Evaporation of a liquid takes place only at its _____.
3. Solids have a definite shape and _____.
4. Matter is made up of tiny _____.
5. Particles move the slowest in _____.

III. NAME THE FOLLOWING:

1. What is the term used for tiny dust particles that remain suspended in the air?
2. What is the temperature at which a liquid changes into vapour throughout the liquid called?
3. What is the slow process by which a liquid changes into vapour at any temperature called?
4. What is the smallest unit of an element that retains its chemical properties?
5. Which ancient Indian philosopher proposed the concept of Parmanu?

IV. ASSERTION–REASON:

1. Assertion (A): Grinding chalk does not change it into a new substance.

Reason (R): Grinding only reduces the size of the chalk particles, while their chemical identity remains unchanged.

2. Assertion (A): Gases can be compressed easily.

Reason (R): Gas particles are far apart and have negligible attractive forces between them.

V. CASE STUDY:

Read the following case study and answer the questions given below.

An incense stick is lit in one corner of a room. Over time, the fragrance spreads throughout the room. Initially, the smell is noticed only near the incense stick, but gradually it reaches all parts of the room. The student observes that the fragrance spreads even without direct air currents.

1. Why is the fragrance initially noticed only near the incense stick?
2. How do air particles help in spreading the fragrance throughout the room?
3. What does this observation demonstrate about the movement of gas particles?
4. Give one real-life example of a similar phenomenon.

**NOTE: REFER TO TEXTBOOK AND NOTES AND WORKSHEETS OF TERM-1
DISCUSSED AND UPLOADED IN GOOGLE CLASSROOM.**