

6th SCIENCE TERM 1

LESSON 1 MEASUREMENT

II. True or false.

1. We can say that mass an object is 126 kg.
2. Length of one's chest can be measured by using metre scale.
3. Ten millimetres makes one centimetre.
4. A hand span is a reliable measure of length.
5. The SI system of units is accepted everywhere in the world.

ANSWERS:

1	2	3	4	5
True	False	True	False	True

III. Fill up the blanks:

1. SI unit of length is symbolically represented as
2. 500 gm = kilogram.
3. Distance between Delhi and Chennai can be measured in
4. 1 m = cm.
5. 5 km = m.

ANSWERS:

1	2	3	4	5
Metre	0.5	Kilometre	100	5000

IV. Complete the analogy.

1. Sugar Beam balance:: Lime juice _____
2. Height of a person: cm:: Length of your sharpened pencil lead: _____
3. Milk: Volume :: Vegetables: _____

ANSWERS:

1. Graduated cylinders
2. mm
3. Weight

VI. Arrange the following in the increasing order of unit.

1 Metre, 1 centimetre, 1 kilometre, and 1 millimetre.

- 1 millimetre > 1 centimetre > 1 metre > 1 kilometre.

VII. Answer in a word or two.

1. What is the full form of SI system?

- An International System of unit

2. Name any one instrument used for measuring mass.

- Beam Balance

3. Find the odd one out.

kilogram, nanometre millimetre, centimetre,

- Kilogram

4. What is the SI Unit of mass?

- Kilogram

5. What are the two parts present in a measurement?

- Multiple and Sub

VIII. Find the answer for the following questions within the grid.

1. 10⁻³ is one _____
2. SI Unit of time is _____
3. Cross view of reading a measurement leads to _____
4. _____ is the one what a clock reads.
5. _____ is the amount of substance present in an object.
6. _____ can be taken to get the final reading of the recordings of different students for a single measurement.
7. _____ is a fundamental quantity.
8. _____ shows the distance covered by an automobile

9. A tailor uses _____ to take measurements to stitch the cloth.
10. Liquids are measured with this physical quantity _____.

ANSWERS:

1	2	3	4
Millimetre	Second	Parallax	Time
5	6	7	8
Mass	Accurate	Length	Odometer
9	10		
Tape	Litres		

IX. Answer briefly.**1. Define measurement.**

- The comparison of an unknown quantity with some known quantity is known as measurement.

2. Define mass.

- Mass is the measure of the amount of matter in an object.

3. The distance between two places is 43.65 km. Convert it into metre and cm.(a) Convert km into metre

$$1 \text{ km} = 1000 \text{ m}$$

$$= 43.65 \times 1000 = \underline{43650 \text{ m}}$$

(b) Convert km into cm.

$$1 \text{ km} = 100000 \text{ cm}$$

$$43.65 \text{ km} = 43.65 \times 100000 = \underline{4365000 \text{ cm}}$$

4. What are the rules to be followed to make accurate measurement with scale?

- Take care to write the correct submultiple.
- Always keep the object in parallel to the scale.

- Start the measurement from '0' of the scale.

X. Solve the following.**1. The distance between your school and your house is 2250 m. Express this distance in kilometre.**

Distance between school and house is 2250 m.

$$1000 \text{ m} = 1 \text{ km}$$

$$\therefore 2250 \text{ m} = 2250 \div 1000 = 2.25 \text{ km.}$$

2. While measuring the length of a sharpened pencil, reading of the scale at one end is 2.0 cm and at the other end is 12.1 cm. What is the length of the pencil?

Sharpened pencil Reading at one end = 2.0 cm.

Sharpened pencil Reading at the other end = 12.1 cm.

Length of the pencil = Difference between two ends.

$$= 12.1 \text{ cm.} - 2.0 \text{ cm.} = 10.1 \text{ cm.}$$

XI. Answer in detail.**1. Explain two methods that you can use to measure the length of a curved line.**

- Draw a curved line AB on a piece of paper.
- Place a string along the curved line.
- Make sure that the string covers every bit of the curved line.
- Mark the points where the curved line begins and ends on the string.
- Now, stretch the string along the length of a meter scale and measure the distance between the two markings of the string and note it.
- This will give you the length of a curved line.

LESSON 2 FORCE AND MOTION

II. Fill in the blanks.

1. A bike moving on a straight road is an example for motion.
2. Gravitational force is a force.
3. Motion of a potter's wheel is an example for motion.
4. When an object covers equal distances in equal interval of time, it is said to be in motion.

ANSWERS:

1	2
Linear	Non contact
3	4
Rotatory	Uniform

III. State True or False. If false, correct the statement.

1. To and for motion is called oscillatory motion.
2. Vibratory motion and rotatory motion are periodic motions.
3. Vehicles moving with varying speeds are said to be in uniform motion.
4. Robots will replace human in future.

ANSWERS:

1	2	3	4
True	True	False	False

VI. Complete the analogy.

1. Kicking a ball: Contact force :: Falling of leaf: ?
2. Distance: metre :: Speed: ?
3. Circulatory motion: A spinning top :: Oscillatory motion : ?

1	2	3
non contact force	m/s	Pendulum

VIII. Answer in a word or two.

1. The force which acts on an object without physical contact.

- Non contact force

2. A change in the position of an object with time.

- Motion

3. The motion which repeats itself after a fixed interval of time.

- Oscillatory motion.

4. The motion of an object which covers equal distances in equal intervals of time.

- Uniform motion.

5. A machine capable of carrying out a complex series of actions automatically.

- Robots.

IX. Answer briefly.

1. Define force.

- Forces are push or pull by an animate or inanimate agency.

2. Name different types of motion based on the path.

- Linear motion.
- Circular motion
- Rotatory motion
- Oscillatory motion
- Zig Zag motion.

3. If you are sitting in a moving car, will you be at rest or motion with respect your friend sitting next to you?

- I am at rest with respect your friend sitting next to you.

4. Rotation of the earth is a periodic motion.**Justify.**

- Motion repeated in equal intervals of time is called periodic motion.
- Therefore earth is a periodic motion.

5. Differentiate between rotational and curvilinear motion

Rotational motion	Curvilinear motion
Body moves along in a circular path.	Body moves along in a curve path.
Do not change its position	Changes its position with motion.
E.g: Rotation of spinning top	E.g: Throwing paper airplanes

X. Answer in detail.**1. What is motion? Classify different types of motion with examples.**

- The change of position of an object with respect to time is known as motion.

Types of motion:

Types of motion	Example
Linear motion	Parade of soldiers
Curvilinear motion	Paper flight moving
Circular motion	Fan
Rotatory motion	Rotating top
Oscillatory motion	Clock pendulum
Zig Zag motion	Motion of bee

LESSON 3 MATTER AROUND US**II. Fill in the blanks.**

1. Matter is made up of _____.
2. In solids, the space between the particles is less than in _____.
3. Grains can be separated from their stalks by _____.
4. Chillies are removed from 'Upma' by _____ method.
5. The method employed to separate clay particles from water is _____.
6. Water obtained from tube wells is usually _____ water.
7. Which among the following will get attracted to by magnet? (safety pins, pencil and rubber band)

1	2	3
Atoms	An liquid	Threshing
4	5	6
Hand picking	Filtration	Safety pin
7		
Impure		

III. State True or False. If false, correct the statement.

1. Air is not compressible.
2. Liquids have no fixed volume but have fixed shape.
3. Particles in solids are free to move.
4. When pulses are washed with water before cooking, water is separated from them by filtration.
5. Strainer is a kind of sieve which is used to separate a liquid from solid.

6. Grain and husk can be separated by winnowing.

7. Air is a pure substance.

8. Butter from curd is separated by sedimentation.

1	2	3	4
False	False	False	False
5	6	7	8
False	True	False	False

IV. Complete the given analogy.

1. Solid: Rigidity :: Gas :

2. Large Inter-particle space: Gas :: : solid.

3. Solid: Definite shape :: Shape of the vessel. :

4. Husk-Grains: Winnowing :: Sawdust- Chalk piece:

5. Murukku from hot oil : :: Coffee powder residue from decoction :

6. Iron-sulphur mixture : :: Mustard seeds from Urad-dhal: Rolling

1	2	3
Compressibility	Little inter particle space	Liquids
4	5	6
Sedimentation and decantation	Hand picking, filtration	Magnetic separation

VI. Answer very briefly.

1. Define the term matter.

- Matter is anything that has mass and occupies space.
- All matter is made up of extremely small particles called atoms.

2. How can husk or fine dust particles be separated from rice before cooking?

- Before cooking rice husk or fine particles are separated by sedimentation.

3. Why do we separate mixtures?

- When we need to remove impurities or harmful components from the mixtures. Eg. Stones from rice.

4. Give an example for mixture and justify your answer with reason.

- A mixture is an impure substance and contains more than one kind of particles.
- So we have to separate mixtures.

5. Define Sedimentation.

- It is the process of Settling down of suspended, insoluble and heavy solid particles.

6. Give the main difference between a pure substance and an impure substance.

Pure substance	Impure substance
Made up of one kind of particles.	Made up of two or more particles.
Cannot be separated by physical means	Can be separated by physical means.

VII. Answer briefly.

1. A rubber ball changes its shape on pressing. Can it be called a solid?

- Yes, a solid has a certain shape and size.
- The shape of the rubber ball changes only if we squeeze it.

2. Why do gases not have fixed shape?

- Gases do not have fixed shapes because of weak force of attraction between the gases and particles.

3. What method will you employ to separate cheese (paneer) from milk? Explain.

- The following steps to be taken to separate Cheese from milk.
 1. Warm up the milk.
 2. Add vinegar or lemon juice.
 3. Separate it into chunks (paneer) are liquid (whey).
 4. Strain the mixture to separate chunks from whey.
 5. Squeeze the excess liquid and shape the paneer.

4. Look at the picture given below and explain the method of separation illustrated.

- Sieving method of separation.
- It is used to separate the solid particles of different sizes.
- Example: Bran from flour.

5. How can you separate a large quantity of tiny bits of paper mixed with pulses / dal?

- Winnowing.
- In this method the lighter papers will be carried by wind and heavier pulses/dals will fall closer and form a separate heap

6. What is meant by food adulteration?

- Sometimes, things that we buy in the market are mixed with harmful and unwanted substances. It is called food adulteration.

7. Mr. Raghu returns home on a hot summer day and wants to have buttermilk. Mrs. Raghu has only curd. What can she do to get buttermilk? Explain

- Mrs. Raghu has to take half a cup of curd, add half a cup of water to it, and mixed well. Now she can serve butter milk.

LESSON 4 THE LIVING WORLD **OF PLANTS**

II. Fill in the blanks.

1. Earth's surface is covered by _____ % of water.
2. The driest places on the Earth are _____.
3. Fixation and absorption are the main functions of _____.
4. Primary organs of photosynthesis are _____.
5. Taproot system is present in _____ plants.

ANSWERS:

1	2	3
70%	Deserts	Roots
4	5	
Leaf	Dicot	

III. State True or False. If false, correct the statement.

1. Plants can live without water.
2. All plants have chlorophyll.
3. Plants have three parts: the root, the stem and leaves.
4. Mountain is an example for freshwater habitat.
5. Root is modified into spines.
6. Green plants need sunlight.

ANSWERS:

1	2	3
False	False	True
4	5	6
False	False	True

V. Arrange the following in correct

sequence. 1. Leaf – Stem – Root – Flower

- Root – Stem – Leaf – Flower.

2. Transpiration – Conduction - Absorption – Fixation

- Fixation – Absorption – Conduction – Transpiration.

VI. Answer very briefly.

1. Classify the plants on the basis of their habitats.

- Terrestrial.
- Aquatic.

2. Mention few desert plants from the following – Cactus, Hydrilla, Mango and Rose.

- Cactus plant.

3. Define the term habitat.

- Each and every organism needs a place to live and reproduce.

- Such a dwelling place is called habitat

4. Relate the terms leaves and photosynthesis.

- Leaves are green in colour, and leaves are responsible for photosynthesis.

VII. Answer briefly.

1. Why do we call jasmine plant, a twiner?

- Weak plant and must need any support to survive.

2. Compare the taproot and fibrous root systems.

Tap root system	Fibrous root system
Single root	Cluster of roots
Seen in dicot plants	Seen in monocot plants

3. Distinguish between terrestrial and aquatic habitats.

Terrestrial habitat	Aquatic habitat
Land habit	Water habit
E.g: forest	E.g: lake

4. List out the plants present in your school garden.

- Neem tree
- Gulmohar
- Mango tree

VIII. Answer in detail.

1. Make a list of the functions of root and stem.

Functions of root:

- Fixes the plant to the soil.
- Absorbs water and minerals from the soil.

- Some plants like carrot and beet root store food in root.

Functions of stem:

- Supports the branches, leaves, flowers and fruits.
- Transports water and minerals from roots to upper aerial parts of the plant.

LESSON 5 THE WORLD OF ANIMALS

II. Fill in the blanks.

1. Water bodies, deserts, mountains are called _____.
2. Based on the number of cells present animals are classified into and _____
3. Tail of a bird acts as a rudder which helps to _____
4. Amoeba moves with the help of _____

ANSWERS:

1	2
Habitat	Unicellular, Multicellular
3	4
Control the direction of the movement	Pseudopodium

III. State True or False. If false, write the correct statement.

1. Habitat is a living or dwelling place of an organism.
2. The geographical features and environmental conditions on earth remain same from one place to other.

3. Amoeba is a unicellular organism and it moves with pseudopodia.
4. Birds can see only one object at a time.
5. Paramecium is a multicellular organism.

ANSWERS:

1	2	3
True	False	True
4	5	
True	False	

IV. Complete the following.

1. Tropical rain forests, grasslands and deserts are known as _____.
2. Some living things are made of a single cell, called _____ organism.
3. The breathing organ of a fish is known as _____.
4. The lizard on the ground with its _____ claw on its feet.
5. Camel stores _____ in its hump.

ANSWERS:

1	2	3
Habitat	Unicellular	gills
4	5	
Walk and run	Fat	

V. Answer very briefly.

1. How do birds catch their prey?

- The birds catch their prey with the help of sharp claws.

2. Where can we see camels in India?

- Rajasthan

3. Name the locomotory organ of Amoeba.

- Pseudopodia

4. What are the body parts of a snake?

- Head, body and tail.

5. Which structure helps the bird to change its direction while flying in air?

- The tail helps the bird to change the direction while flying in air.

VI. Answer briefly.**1. Differentiate between unicellular and multicellular organisms.**

Unicellular	Multicellular
Made up of single cell	Made up of multiple cells
They lack tissue	Composed of tissue
E.g: Bacteria	E.g: Humans

2. Write the adaptive features of polar bear and penguin.

- Polar bear - Thick skin for protection, white fur.
- Penguin - Paddle to swim, walk with two legs.

3. Mention the features that help a bird to fly in the air?

- Their modified wings.
- They have hollow and light bones.
- Their body is covered with feathers.

4. What are the adaptations seen in different types of vertebrates?

Fish	Fins, gills and streamline body
Camel	Wings and hollow light bones
Bird	Hump, flat padded feet and thick skin.
Lizard	Scaly skin, movable eyelids

VII. Answer in detail.**1. Describe the various features which help camel dwell well in the desert.**

- Camels have long legs to keep their bodies away from the hot desert sand.
- Camels can drink a lot of water when it's available and store it in their bodies.
- A camel's hump stores fat, which it can break down for energy when needed.
- Camels have large, flat padded feet that help them walk easily on soft sand, earning them the nickname "Ship of the desert."
- Camels have long eyelashes and hairs to protect their eyes and ears from blowing dust.
- They can close their nostrils to avoid dust during sandstorms in the desert.

LESSON 6 HEALTH AND HYGIENE**II. State True or False. If false, write the correct statement.**

1. There are three main nutrients present in food.
2. Fats are stored as energy by our body.
3. All bacteria have flagella.
4. Iron helps in the formation of haemoglobin.
5. Virus can grow and multiply outside host.

ANSWERS:

1	2	3
False	True	False
4	5	
True	False	

III. Fill in the blanks.

1. Malnutrition leads to _____.
2. Iodine deficiency leads to _____ in adults.
3. Vitamin D deficiency causes _____.
4. Typhoid is transmitted due to contamination of _____ and water.
5. Influenza is a _____ disease.

ANSWERS:

1	2	3
Deficiency Disease	Goitre	Rickets and water
4	5	
Food	viral	

IV. Complete the analogy.

1. Rice : Carbohydrate :: Pulses : _____.
2. Vitamin D : Rickets :: Vitamin C : _____.
3. Iodine : Goitre :: Iron : _____.
4. Cholera : Bacteria :: Smallpox : _____

ANSWERS:

1	2
Protein	Scurvy
3	4
Anemia	Virus

VII. Answer very briefly.

1. Write two examples for each of the following. a) Food items rich in fat. b)

Vitamin deficiency diseases.

- a) Meat, fish, egg yolk and milk.
- b) Night blindness, Beri Beri, Scurvy, Rickets.

2. Differentiate between carbohydrate and protein.**Carbohydrate:**

- Energy giving component of the food.
- The sources of carbohydrates are nuts, fruits, rice, and maize.

Protein:

- It is body building foods.
- The sources of proteins are pulses, soybean, nuts, egg, and fish.

3. Define balanced diet.

- A diet which contains a sufficient amount of various nutrients to ensure good health is called a Balanced diet.

4. Why should fruits and vegetables not be washed after cutting?

- We should not wash the fruits and vegetables after cutting, because the minerals and protein in the fruits and vegetables will also be washed away.

5. Mention any two viral diseases.

- Common cold
- Small pox
- Polio, etc.

6. What are the main features of a microorganism?

- Microorganisms are very small in size and we can see them only with the help of microscope.

VIII. Answer in details.

1. Tabulate the vitamins and their corresponding deficiency diseases.

Vitamins	Deficiency diseases
Vitamin A	Night blindness
Vitamin B	Beri Beri
Vitamin C	Scurvy
Vitamin D	Rickets
Vitamin E	Nervous Weakness
Vitamin K	Weakness of bones

LESSON 7 COMPUTER AN INTRODUCTION

II. Fill in the blanks.

- Data is _____ information.
- World's first general purpose computer is _____.
- Information is _____ data.
- Fifth generation computer has _____ intelligence
- _____ is the device that uses Index number.

ANSWERS:

1	2	3
Processed	Electronic Numerical Integrator and Computer	A form of processed
4	5	
Artificial	Analog Computer	

III. State True or False.

- Computer is an electronic device.
- Sir Isaac Newton invented computer.
- Computer can do calculations fast.

ANSWERS:

1	2	3
True	False	True

V. Answer briefly.**1. What is a computer?**

- Computer is an electronic device that processes data and information according to our needs.

2. Who are the pioneers / forerunners of computer?

- **Charles Babbage:** a professor in mathematics has designed an analog computer.
- **Augusta Ada Lovelace:** the first programmer as she developed essential commands for mathematical operations.

3. Write a short note on Data.

- Data is the information that has to be processed.
- They are in the form of numbers, alphabets, and images.

4. Name any four input devices.

- Keyboard, Mouse, Bar code reader, Digital camera, etc.

5. Differentiate hardware and software.

- **Hardware:** The parts that are available on the computer that helps the software to work.
- **Software:** The commands or programs that are used on a computer.

VI. Answer in detail.

1. Explain in detail above the applications of computer.

- The computer is used in textile shops for billing purposes.
- It is used in the railway station for issuing tickets.
- It is used in the banks for multi-purpose.
- It is used in ATMs.
- It is used in the Post office.

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