

SELECTION

6

SCIENCE

**ANBU NILAYAM
MADURAI - 625001**

SELECTION

SIXTH STANDARD

6

SCIENCE

FULL TERM

TERM-I + TERM-II + TERM-III

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SELECTION

⑥ SCIENCE

TERM - I

Unit - 1 Measurements

Evaluation

I. Choose the correct answer.

1. The height of a tree can be measured by

- a) metre scale b) metre rod
c) plastic ruler d) measuring tape

Ans : d) measuring tape

2. Conversion of 7m into cm gives

- a) 70cm b) 7cm c) 700cm d) 7000cm

Ans : c) 700cm

3. Quantity that can be measured is called

- a) Physical quantity b) Measurement
c) Unit d) Motion Ans : a) Physical quantity

4. Choose the correct one

- a) km > mm > cm > m b) km > mm > m > cm
c) km > m > cm > mm d) km > cm > m > mm

Ans : c) km > m > cm > mm

5. While measuring the length of an object using a ruler, the position of your eye should be

- a) Left side of the point
b) Vertically above the point where the measurement is to be taken.
c) Right side of the point
d) Any where according to one's convenience.

Ans : b) Vertically above the point where the measurement is to be taken.

II. Fill in the blanks.

1. SI unit of length is

Ans : metre

2. 500 gm = kilogram

Ans : 0.5 kg

XI. Answer in detail

1. Explain two methods that you can use to measure the length of a curved line.

Ans :

1. First Method:

- ★ 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.

2. Second Method :

- ★ Draw a curved line AB on a piece of paper.
- ★ Separate the legs of the divider by 0.5 cm or 1 cm using a ruler.
- ★ Place it on the curved line starting from one end.
- ★ Mark the position of the other end.
- ★ Move it along the line again and again cutting the line into number of segments of equal lengths.
- ★ The remaining parts of the line can be measured using a scale.
- ★ Count the number of segments.
- ★ Therefore, the length of the line = (number of segments × length of each segment) + length of the left over part.

2. Fill in the following chart.

| Property | Definition | Basic Unit | Instrument used for measuring |
|----------|------------|------------|-------------------------------|
| Length | | | |
| Mass | | | |
| Volume | | | |
| Time | | | |

Ans :

| Property | Definition | Basic Unit | Instrument used for measuring |
|----------|---|--------------|-------------------------------|
| Length | The distance between one point and the other desired point is known as length | metre | Measuring tape, Metre scale |
| Mass | Mass is the measure of the amount of matter in an object. | kilogram | Beam balance. |
| Volume | Volume is the space occupied by an object | Solid-metre | Measuring scale |
| | | Liquid-litre | Graduated cylinder |
| Time | It is period between two events | Second | Clock |

| |
|---|
| Additional Questions & Answers |
|---|

I. Choose the best answer.

1. SI unit of Mass

- a) metre b) kilogram c) ampere d) candela

Ans : b) kilogram

2. 1000 millimetre is

- a) 10 metre b) 100 metre c) 1000 metre d) 1 metre

Ans : d) 1 metre

II. Fill in the blanks.

1. 1000 metre is.....

Ans : 1 kilometre

2. 1000 milligram is.....

Ans : 1 gram

3. 1000 gram is

Ans : 1 kilogram

4. are used to measure time.

Ans : clock

5. A scale was invented by a

Ans : William Bedwell

| |
|----------------------------------|
| Unit - 2 Force and Motion |
|----------------------------------|

Evaluation**I. Choose the correct answer.****1. Unit of speed is**

- a. m b. s c. kg d. m/s **Ans : d) m/s**

2. Which among the following is an oscillatory motion?

- a. Rotation of the earth about its axis
 b. Revolution of the moon about the earth
 c. To and fro movement of a vibrating string
 d. All of these.

Ans : c) To and fro movement of a vibrating string**3. The correct relation among the following is**

- a. Speed = distance × time
 b. Speed = distance / time.
 c. Speed = time / distance
 d. Speed = 1 / (distance × time)

Ans : b. Speed = distance / time

4. Gita travels with her father in a bike to her uncle's house which is 40 km away from her home. She takes 40 minutes to reach there.

Statement 1 : She travels at a speed of 1 km / minute.**Statement 2 :** She travels at a speed of 1 km/hour

- a. Statement 1 alone is correct.
 b. Statement 2 alone is correct.
 c. Both statements are correct.
 d. Neither statement 1 nor statement 2 is correct.

Ans : a. Statement 1 alone is correct.**II. Fill in the blanks**

1. A bike moving on a straight road is an example for _____ motion. **Ans : Linear motion.**

2. Gravitational force is a _____ force. **Ans : Non- contact force.**

3. Motion of a potter's wheel is an example for _____ motion. **Ans : Rotatory motion.**

4. When an object covers equal distances in equal interval of time, it is said to be in _____ motion. **Ans : Uniform motion.**

III . State true or false. If false, correct the statement.

1. To and fro motion is called oscillatory motion. **Ans : True**

2. Vibratory motion and rotatory motion are periodic motions. **Ans : False**

Correct statement : Vibratory motion and **oscillatory** motion are periodic motions.






3. Vehicles moving with varying speeds are said to be in uniform motion. **Ans : False**

Correct statement : Vehicles moving with varying speeds are said to be in **non - uniform** motion.

4. Robots will replace human in future. **Ans : True**

Correct statement : Robots will **not replace** human in future.

IV. Match the following :

- | | | |
|----|---|-------------------------------|
| 1. |  | a. Circular motion |
| 2. |  | b. Oscillatory motion |
| 3. |  | c. Linear motion |
| 4. |  | d. Rotatory motion |
| 5. |  | e. Linear and rotatory motion |

- Ans :**
- 1 - c) linear motion
 - 2 - d) rotatory motion
 - 3 - b) Oscillatory motion
 - 4 - a) Circular motion
 - 5 - e) linear and rotatory motion

V. Given below is the distance-travelled by an elephant across a forest with uniform speed. Complete the data of the table given below with the idea of uniform speed.

| | | | | | | |
|--------------|---|---|---|----|---|----|
| Distance (m) | 0 | 4 | | 12 | | 20 |
| Time (s) | 0 | 2 | 4 | | 8 | 10 |

Ans : $s = d/t$

(i) distance $d = s \times t$ ($s = 2; t = 4$)

$$d = 2 \times 4 = 8$$

(ii) time $t = d/s$ ($s = 2; d = 12$)

$$t = 12/2 = 6$$

(iii) distance $d = s \times t$ ($s = 2; t = 8$)

$$d = 2 \times 8 = 16$$

| | | | | | | |
|--------------|---|---|---|----|----|----|
| Distance (m) | 0 | 4 | 8 | 12 | 16 | 20 |
| Time (s) | 0 | 2 | 4 | 6 | 8 | 10 |

| |
|----------------------------------|
| Unit - 3 Matter Around Us |
|----------------------------------|

Evaluation**I. Choose the correct answer**

1. _____ is not made of matter.

- a) Gold ring b) Iron nail c) Light ray d) Oil drop

Ans : c) Light ray

2. 200 ml of water is poured into a bowl of 400ml capacity.

The volume of water will be _____

- a) 400 ml b) 600 ml c) 200ml d) 800ml

Ans : c) 200 ml

3. Seeds from water-melon can be removed by _____ method.

- a) hand-picking b) filtration
c) magnetic separation d) decantation

Ans : a) hand - picking

4. Lighter impurities like dust when mixed with rice or pulses can be removed by _____.

- a) filtration b) sedimentation
c) decantation d) winnowing

Ans : d) winnowing

5. _____ is essential to perform winnowing activity.

- a) Rain b) Soil c) Water d) Air

Ans : d) Air

6. Filtration method is effective in separating _____ mixture.

- a) solid-solid b) solid-liquid
c) liquid-liquid d) liquid-gas

Ans : b) solid-liquid

7. Among the following _____ is not a mixture.

- a) coffee with milk b) lemon juice
c) water d) ice cream embedded with nuts.

Ans : c) water

II) Fill in the blanks

1. Matter is made up of _____ **Ans : atoms**

2. In solids, the space between the particles is less than in _____ **Ans : liquid and gas**

3. Grains can be separated from their stalks by _____ **Ans : Threshing**

4. Chillies are removed from 'Upma' by _____ method. **Ans : hand picking**

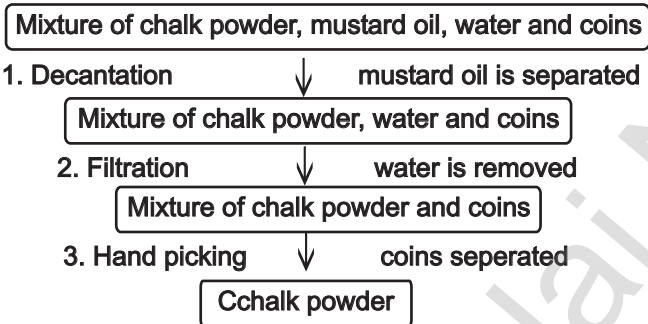
5. The method employed to separate clay particles from water is _____ **Ans : filtration**

6. Water obtained from tube wells is usually _____ water. **Ans : impure**

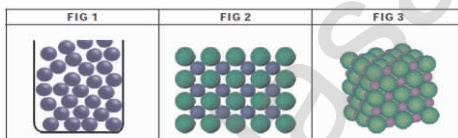
7. Which among the following _____ will get attracted to by magnet? (safety pins, pencil and rubber band) **Ans : safety pins**

2. Using suitable apparatus from your laboratory separate the mixture of chalk powder, mustard oil, water and coins. Draw a flow chart to show the separation process.

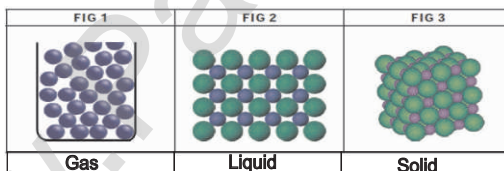
Ans :



3. Justify your answer.



Arrangement of particles in three different phases of matter is shown above.



a) Which state is represented by Fig. 1?

Ans : The fig 1 represents a gaseous state.

b) In which state will the inter particle attraction be maximum?

Ans : In fig 3 between the solid particles the inter particle attraction will be maximum.

c) Which one of them cannot be contained in an open vessel?

Ans : In fig 1 gaseous state cannot be contained in an open vessel.

d) Which one can take the shape of its container?

Ans : In fig 2 the liquid state can take the shape of its container.

| |
|---------------------------------------|
| Unit - 5. The World of Animals |
|---------------------------------------|

Evaluation**I Choose the correct answers .****1. The study of living beings or organisms is called**

- a) Psychology b) Biology c) Zoology d) Botany

Ans : b) Biology**2. Which of the following are characteristics of living beings?**

- (i) Respiration (ii) Reproduction (iii) Adaptation (iv) Excretion

Choose the correct one

- a) (i), (ii), and (iv) only b) (i), (ii) only
c) (ii) and (iv) only d) (i), (iv), (ii) and (iii)

Ans : d) (i), (iv), (ii) and (iii)**3. Lizards breathe through their**

- a) skin b) gills c) lungs d) trachea

Ans : c) lungs**4. All animals need**

- a) food and water only b) water only
c) air, food and water d) food only

Ans : c) air, food and water**5. Which animal has the special organs of breathing called gills**

- a) Earthworm b) Fox c) Fish d) frog

Ans : c) Fish**6. Choose the set that represents only biotic components of a habitat**

- a) Tiger, Deer, Grass, Soil
b) Rocks, Soil, Plants, Air
c) Sand, Turtle, Crab, Rocks
d) Aquatic plant, Fish, Frog, Insects

Ans: d) Aquatic plant, Fish, Frog, Insects**7. Which of the following cannot be called as a habitat?**

- a) A desert with camels
b) A pond with fish and snails
c) Cultivated land with grazing cattle
d) A jungle with wild animals

Ans : c) Cultivated land with grazing cattle**8. Birds fly in the air with the help of**

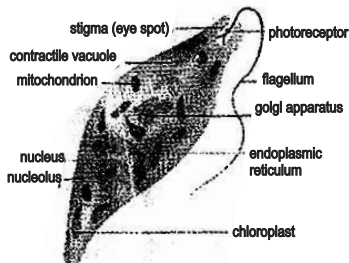
- a) heavy and strong bones b) soft and thick bones
c) hollow and light bones d) flat and thick bones

Ans : c) hollow and light bones**9. Paramecium moves from one place to other with the help of**

- a) pseudopodia b) flagella c) foot d) cilia

Ans : d) cilia

b) Euglena.

**Activity : 1**

Look at the below picture and prepare a chart for the following interpretation.

How does the climate differ in these habitats?



Ans : In terrestrial habitat, the temperature is more. In water habitat, the temperature is less.

Name some animals that exist in these habitats.

Ans : Water habitat animals : fish, duck.

Terrestrial habitat animals : cow, rabbit.










Can an animal survive if it is shifted from one habitat to another contrasting habitat?

Ans : No, a animal cannot survive if it is shifted from one habitat to another contrasting habitat.

Activity : 2

Collect the pictures of various ecosystems like lake, pond, forest, desert, mountains, and Polar regions and prepare a chart of animals in these places.

Ans:

| | |
|---|---|
| Lakes | Ponds |
|  |  |
| Frog | Fish |
| Forests | Deserts |
|   |  |
| Bird Lion | Camel |
|  | |
| Lizard | |
| Mountains | Polar Regions |
|  |   |
| Mountain Goat | Penguins Polar Bear |

| |
|--|
| Unit - 7 Computer - An Introduction |
|--|

Evaluation

I. Choose the Correct answer :

1. Who is the father of computer ?

- a) Martin Luther King b) Graham Bell
c) Charlie Chaplin d) Charles Babbage

Ans : d) Charles Babbage

2. Which of the following is another form of computer ?

- a) Blackboard b) Mobile c) Radio d) Book

Ans : b) Mobile

3. When was the first computer introduced ?

- a) 1980 b) 1947 c) 1946 d) 1985 **Ans : c) 1946**

4. Who is the computer's first programmer ?

- a) Lady Wellington b) Augusta ado Lovelace
c) Mary Curie d) Mary Comb

Ans : b) Augusta ado Lovelace

5. Pick out the odd one.

- a) Calculator b) Abacus
c) Flash card d) Laptop

Ans : c) Flash card

II. Fill in the blanks.

1. Data is _____ information. **Ans : un processed**

2. World's first general purpose computer is _____

Ans : ENIAC

3. Information is _____ data. **Ans : a form of processed**

4. Fifth generation computer has _____ intelligence.

Ans : Artificial

5. _____ is the device that uses Index number.

Ans : Analogue computer

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

1. Computer is an Electronic device. **Ans: True**

2. Sir Isaac Newton invented Computer. **Ans : False.**

Correct statement : Charles Babbage invented Computer.

3. Computer can do calculations fast. **Ans : True**

IV. Match the following

| | | |
|----------------------------|---|-------------------------|
| First generation Computer | - | Artificial Intelligence |
| Second generation Computer | - | Integrated Circuit |
| Third generation Computer | - | Vacuum tubes |
| Fourth generation Computer | - | Transistor |
| Fifth generation Computer | - | Micro processor |

SELECTION

⑥ SCIENCE

TERM - II

Unit - 1 Heat

Evaluation

I. Choose the appropriate answer.

1. When an object is heated, the molecules that make up the object

- a) begin to move faster b) lose energy
c) become heavier d) become lighter

Ans : a) begin to move faster

2. The unit of heat is

- a) newton b) joule
c) volt d) celsius Ans : b) joule

3. One litre of water at 30°C is mixed with one litre of water at 50°C. The temperature of the mixture will be

- a) 80°C b) More than 50°C but less than 80°C
c) 20°C d) around 40°C Ans : d) around 40°C

4. An iron ball at 50°C is dropped in a mug containing water at 50°C. The heat will

- a) flow from iron ball to water.
b) not flow from iron ball to water or from water to iron ball.
c) flow from water to iron ball.
d) increase the temperature of both.

Ans : b) not flow from iron ball to water or from water to iron ball.

II. Fill in the blanks.

1. Heat flows from a _____ body to a _____ body.

Ans : (higher temperature) (lower temperature)

2. The hotness of the object is determined by its _____.

Ans : temperature

3. The SI unit of temperature is _____.

Ans : kelvin

VIII. Give short answer.

1. What difference do you think heating the solid will make in their molecules ?

Ans : ★ The molecules in the solid move faster and vibrate when heating, spread apart and occupy more space.
★ So solid expands when heated.

2. Distinguish between heat and temperature.

Ans :

| S. No. | Heat | Temperature |
|--------|---|---|
| 1. | Heat not only depends on the temperature of the substance but also depends on how many molecules are there in the object. | Temperature is related to how fast the atoms or molecules move or vibrate within the substance. |
| 2. | Heat measures the total Kinetic Energy of the molecules in the substance. | Temperature measures the average kinetic energy of molecules. |
| 3. | SI unit is joule. | SI unit is kelvin. |

IX. Answer in detail.

1. Explain thermal expansion with suitable examples.

Ans : a) Thermal expansion : The expansion of a substance on heating is called, the thermal expansion of that substance.

b) Thermal expansion Examples :

(i) Fitting the iron rim on the wooden wheel :

★ The diameter of the iron ring is slightly less than that of the wooden wheel.

★ So, it cannot be easily slipped on from the rim of wooden wheel.

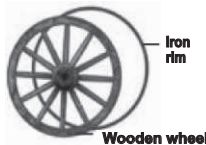
★ The iron ring is, therefore, first heated to a higher temperature so that it expands in size and the hot ring is then easily slipped over to the rim of the wooden wheel.

★ Cold water is now poured on the iron ring so that it contracts in size and holds the wooden wheel tightly.

(ii) Rivetting :

★ Rivets are used to join two steel plates together.

★ Hot rivet is driven through the hole in the plates.



Wooden wheel



4. Wind mills

★ In wind mills, wind energy is used to rotate the turbine to produce electricity.

★ Here kinetic energy is converted into electrical energy.

2. Tabulate the different components of an electric circuit and their respective symbols.

Ans :

a) A cell :



a source of electric current

b) Connecting wires :



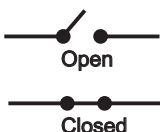
for carrying current

c) A bulb :



a device that consume the electricity

d) A key or a switch :



this may be connected anywhere along the circuit to stop or allow the flow of current.

3. Write short notes on conductors and insulators.

Ans :

| S. No. | Conductors | Insulators (Non-Conductors) |
|--------|--|---|
| 1. | The materials which allow electric charges to pass through them are called conductors. | The materials which do not allow electric charges to pass through them are called insulators or non-conductors. |
| 2. | Examples: Copper, iron, aluminum, impure water, earth etc., | Examples: plastic, glass, wood, rubber, china clay, ebonite etc., |

Activity : 1

List out the electrical appliances used in your home.

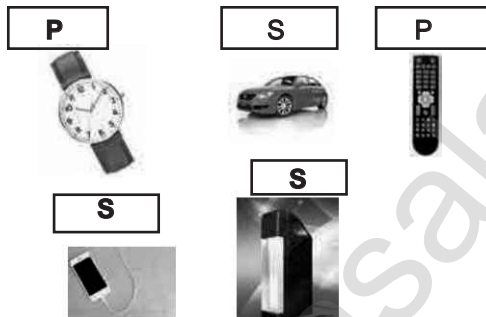
Ans :

- | | | |
|----------------|----------------|------------------|
| ★ Tube light | ★ Fan | ★ Mixer grinder |
| ★ Refrigerator | ★ Water heater | ★ Electric stove |

Activity : 2

From the following pictures, identify those use primary cell and secondary cell. Mark Primary cell as 'P' Secondary cell as 'S'.

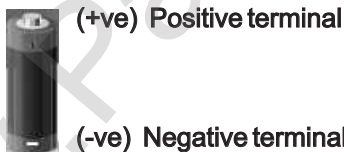
Ans :

**Activity: 3**

Take a dry cell used in a flashlight or clock. Read the label and note the following.

1. Where is the '+' and '-' symbol?

Ans :

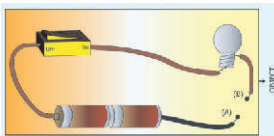


2. What is the output voltage?

Ans : The output voltage is 1.5 v

Activity 4:

Connect the objects given in the table between A and B and write whether the bulb glows or not.



Activity 8:

Look at the pictures and write whether they are desirable or undesirable changes.

Ans :

Forest fire

Decaying of fruit

Egg to chicken

Wind mills



Undesirable change



Undesirable change



Desirable Change



Desirable Change

Activity 9:

Identify the type of changes

Natural / Human made

Ans: Floods



Natural

Planting of seedlings



Human made

Carpentry



Human made

Land slides



Natural

Unit - 5. The Cell

Evaluation

I. Choose the appropriate answer.

1 The unit of measurement used for expressing dimension (size) of cell is _____

- a) centimeter b) millimeter
c) micrometer d) meter

Ans : c) micrometer

2. Under the microscope Priya observes a cell that has a cell wall and distinct nucleus. The cell that she observed is _____

- a) a plant cell b) an animal cell
c) a nerve cell d) a bacteria cell

Ans : a) a plant cell

3. The 'control centre' of the eukaryotic cell is _____

- a) Cell wall b) Nucleus
c) Vacuoles d) Chloroplast

Ans : b) Nucleus

4. Which one of the following is not an unicellular organism?

- a) Yeast b) Amoeba
c) Spirogyra d) Bacteria

Ans : c) Spirogyra

5. Most organelles in an eukaryotic cell is found in the _____

- a) Cell wall b) cytoplasm
c) nucleus d) Vacuole

Ans : b) cytoplasm

II. Fill in the blanks.

1. The instrument used to observe the cell is _____

Ans : microscope

2. I take part in food production of a cell. Who am I? _____

Ans : chloroplast

3. I am like a policeman. Who am I _____? Ans : cell wall

4. The Term " cell" was coined by _____ Ans : Robert Hooke

5. The egg of an Ostrich is the _____ single cell.

Ans : largest

III. True or False. If False, give the correct statement

1. A cell is the smallest unit of life.

Ans : True

2. Nerve cell is the longest cell.

Ans : True

3. Prokaryotes were the first form of the life on earth.

Ans : True

4. The organelles of both plants and animals are made up of cells.

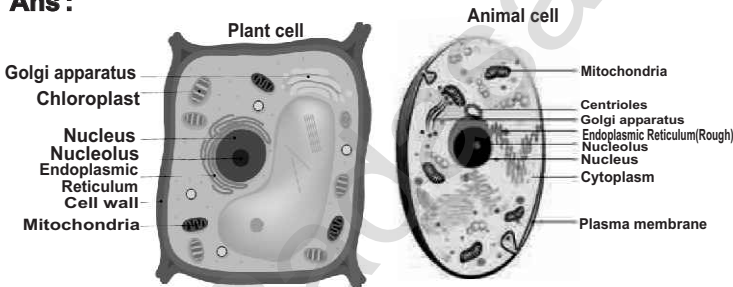
Ans : False

Correct statement: The cells of both plants and animals are made up of organelles.

5. New cells are produced from the existing cells. Ans : True

3. Distinguish between prokaryotic and eukaryotic cells.**Ans :**

| S.No. | Prokaryotic cell | Eukaryotic cell |
|-------|---|--|
| 1. | It's diameter ranges from 1 to 2 micron | It's diameter ranges from 10 to 100 micron |
| 2. | Absence of membrane bound organelles | Presence of membrane bound organelles |
| 3. | Nucleus is not surrounded by nuclear membrane | True nucleus is surrounded by nuclear membrane |
| 4. | Absence of nucleoli | Presence of nucleoli |

4. Make sketches of animal and plant cells which you observe under microscope.**Ans :****5. Write about the contribution of Robert Hooke in cell biology.**

Ans : ★ The English man Robert Hooke was a scientist who improved microscope which was used in those days.

★ One day Hooke made thin sections of the cork and observed them through his microscope.

★ He observed many small identical chambers which were hexagonal in shape.

★ He was surprised.

★ After that he saw many objects like Butterfly's wings, Bee's compound eyes etc.,

★ Based on this observations Hooke published a book named Micrographia in the year 1665, where he first used the term Cell .

★ He described the structure of tissue using the term cell.

Unit - 6. Human Organ Systems

Evaluation

I. Choose the appropriate answer.

1. Circulatory system transports these throughout the body

- a) Oxygen b) Nutrient
c) Hormones d) All of these **Ans : d) All of these**

2. Main organ of respiration in human body is

- a) Stomach b) Spleen
c) Heart d) Lungs **Ans : d) Lungs**

3. Breakdown of food into smaller molecules in our body is known as

- a) Muscle contraction b) Respiration
c) Digestion d) Excretion **Ans : c) Digestion**

II. Fill in the blanks.

1. A group of organs together make up an _____ system.

Ans : organ

2. The part of the skeleton that protects the brain is _____

Ans : skull

3. The process by which the body removes waste is _____

Ans : excretion

4. The _____ is the largest sense organ in our body.

Ans : skin

5. The endocrine glands produce chemical substances called _____

Ans : hormones

III. True or False. If False, give the correct statement

1. Blood is produced in the bone marrow. **Ans : False**

Correct statement : Red Blood Corpuscles are produced in the bone marrow.

2. All the waste products of the body are excreted through the circulatory system. **Ans : False**

Correct statement : All the waste products of the body are excreted through the excretory system.

3. The other name of food pipe is alimentary canal. **Ans : False**

Correct statement : The other name of food pipe is oesophagus.

4. Thin tube like structures which are the component of circulatory system are called blood vessels. **Ans : False**

Correct statement : Thin tube like structures which are the component of circulatory system are called blood capillaries.

3. Differentiate between the voluntary muscles and involuntary muscles.

Ans :

| S.No. | Voluntary muscles | Involuntary muscles |
|-------|---|--|
| 1. | Skeletal muscles of our body are attached to the bones. | Smooth muscles are found in the walls of digestive tract, urinary bladder, arteries and other internal organs. |
| 2. | They can be controlled by our will. | They are not controlled by our will. |

IX. Answer in detail

1 List out the functions of Endocrine system and Nervous system.

Ans :

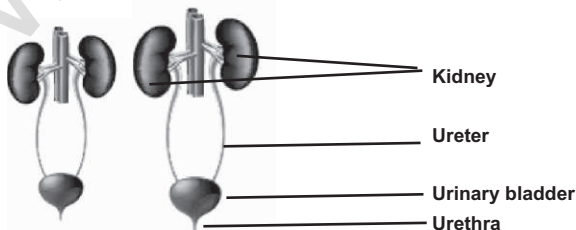
a) Functions of Endocrine System:

1. It regulates various functions of the body.
2. It maintains the internal environment.
3. Endocrine glands are present in the body, produce chemical substances called hormones.

b) The Functions of the Nervous System :

1. The conduction of signals from sensory receptors.
2. The interpretation of the sensory signals and the formulation of responses.
3. The conduction of signals from the brain and spinal cord to effectors, such as muscle and gland cells.

2. Label the diagram given below to show the four main parts of the urinary system and answer the following questions.



A. Which organ removes extra salts and water from the blood?

Ans : Kidney

SELECTION

⑥ SCIENCE

TERM - III

UNIT - 1. Magnetism

Evaluation

I. Choose the appropriate answer

1. An object that is attracted by magnet.

- a) wooden piece b) plain pins
c) eraser d) a piece of paper

Ans : b) plain pins

2. People who made mariner's compass for the first time.

- a) Indians b) Europeans
c) Chinese d) Egyptians Ans : c) Chinese

3. A freely suspended magnet always comes to rest in the.....direction.

- a) North - east b) South - west
c) East - west d) North - south

Ans : d) North - south

4. Magnets lose their properties when they are

- a) used b) stored
c) hit with a hammer d) cleaned

Ans : c) hit with a hammer

5. Mariner's compass is used to find the

- a) speed b) displacement
c) direction d) motion Ans : c) direction

II. Fill in the Blanks

1. Artificial magnets are made in different shapes such as.....,and..... Ans : Bar, Horse shoe, Ring.

2. The Materials which are attracted towards the magnet are called..... Ans : Magnetic Substances

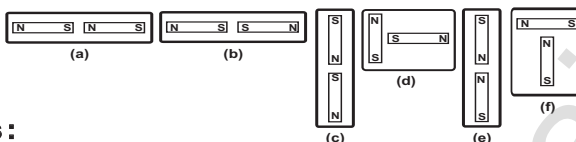
3. Paper is not a.....material. Ans : Magnetic

3. Attraction, repulsion, pointing direction, illumination.

Ans : Odd one : illumination

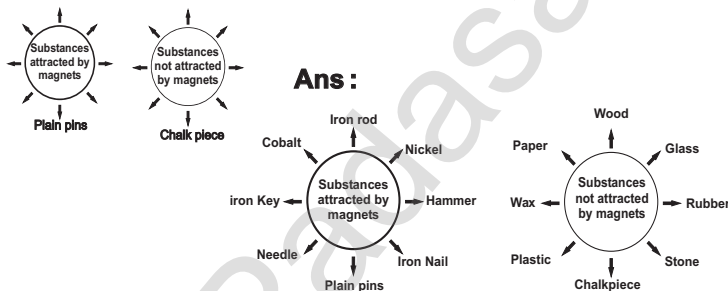
Reason : Illumination is not a property of a magnet. Others are magnetic properties.

VI. The following diagrams show two magnets near one another. Use the words, "Attract, Repel, Turn around" to describe what happens in each case.



Ans :

a) Attract b) Repel c) Attract d) Turn around
e) Repel f) Turn around

VII. Write down the names of substances.

Ans :

VIII. Give short answer

1. Explain the attraction and repulsion between magnetic poles.

Ans :



Attraction



Attraction

(Unlike poles

(S-N, N-S) attract each other.



Repulsion



Repulsion

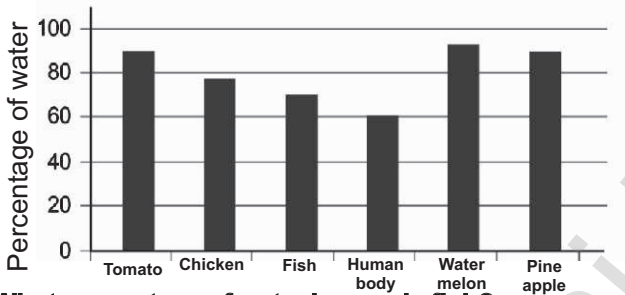
Like poles (N-N, S-S)

repel each other.

2. A student who checked some magnets in the school laboratory found out that their magnetic force is worn out. Give three reasons for that ?

Ans : Reasons : Magnets lose their properties if they are heated or dropped from a height or hit with a hammer.

XII. (1). Observe the given graph carefully and answer the questions.



a. What percentage of water is seen in fish?

Ans : 70%

b. Name the food item that has maximum amount of water in its content.

Ans : Watermelon

c. Name the food item that has minimum amount of water in its content.

Ans : Fish

d. Human body consists of about.....percentage of water.

Ans : 60 %

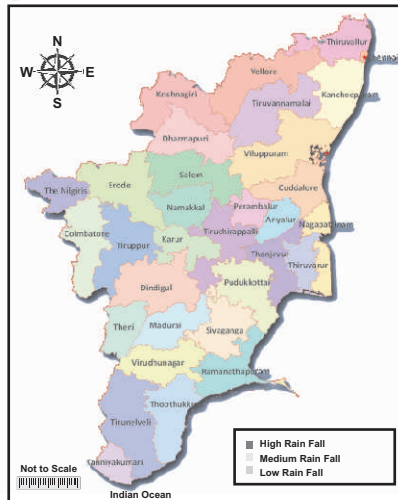
e. Specify the food item that can be consumed by a person when he/ she is suffering from dehydration.

Ans : Watermelon

2) Look at the map of Tamilnadu showing annual rainfall and answer the questions given below

a. Identify the districts that get only low annual rainfall in Tamilnadu.

Ans : Dharmapuri, Erode, Perambalur, Trichy, Karur, Tanjore, Dindigul, Pudukkottai, Madurai, Sivagangai, Ramanatha puram.



2. Gypsum is largely used in medical industries.

Ans : False

Correct Statement : Epsom is largely used in medical industries.

3. Plaster of Paris is obtained from heating gypsum.

Ans : True

4. Adhesives are the substances used to separate the components.

Ans : False

Correct Statement : Adhesives are the substances used to bind the components.

5. NPK are the primary nutrients for plants.

Ans : True

IV. Match the following

| | | |
|----------------|---|----------------------|
| 1. Soap | - | C_6H_5OH |
| 2. Cement | - | $CaSO_4 \cdot 2H_2O$ |
| 3. Fertilizers | - | NaOH |
| 4. Gypsum | - | RCC |
| 5. Phenol | - | NPK |

Ans :

| | | |
|----------------|---|----------------------|
| 1. Soap | - | NaOH |
| 2. Cement | - | RCC |
| 3. Fertilizers | - | NPK |
| 4. Gypsum | - | $CaSO_4 \cdot 2H_2O$ |
| 5. Phenol | - | C_6H_5OH |

V. Arrange the following statements in correct sequence

1. Pour that solution into an empty match box, soap can be obtained after drying.

2. Take necessary quantity of water in a jar.

3. Then add coconut oil drop by drop and stir it well.

4. Add concentrated sodium hydroxide in the jar and allow it to cool.

5. Try this soap to wash your hand kerchief.

6. Cover your work area with old newspaper.

Ans : Correct Sequence : 6 - 2 - 4 - 3 - 1 - 5

1. Cover your work area with old newspaper.

2. Take necessary quantity of water in a jar.

3. Add concentrated sodium hydroxide in the jar and allow it to cool.

4. Then add coconut oil drop by drop and stir it well.

5. Pour that solution into an empty match box, soap can be obtained after drying.

6. Try this soap to wash your hand kerchief.

UNIT - 4. Our Environment

Evaluation

I. Choose the appropriate answer

1. Identify the fresh water ecosystem.

- a) Pond b) Lake
c) River d) All of them

Ans : d) All of them

2. Producers are.....

- a) Animals b) Birds
c) Plants d) Snakes

Ans : c) Plants

3. It is a biodegradable waste.

- a) Plastic b) Coconut Shell
c) Glass d) Aluminium

Ans : b) Coconut Shell

4. It is an undesirable change that occurs in air and water.

- a) Recycling b) Reuse
c) Pollution d) Reduce

Ans : c) Pollution

5. Usage of chemical pesticides and fertilizers causes.....pollution.

- a) Air Pollution b) Water Pollution
c) Noise Pollution d) None of the above

Ans : b) Water Pollution

II. Fill in the blanks

1. Primary consumers that eat plants are called.....

Ans : Herbivores

2. Temperature, light and wind are.....factors.

Ans : physical

3.....is the process of converting waste materials into new materials.

Ans : Recycling

4. Water pollution can spread.....diseases in man.

Ans : water borne

5. The 3R's are Reduce,.....and Recycle.

Ans : Reuse

III. True or False. If False, give the correct statement

1. The Pacific ocean is an example of an marine ecosystem.

Ans : True

2. Bacteria and fungi are called decomposers.

Ans : True

3. Human and animal wastes are examples of non-biodegradable waste.

Ans : False

Correct Statement : Human and animal wastes are examples of bio degradable waste.

II. Fill in the blanks :

1. Producers are also called as.....**Ans : autotrophs**
 2.....inter connects all food chains. **Ans : Food web**
 3. The process converting waste materials into better quality product is..... **Ans : Creative reuse / upcycling**

III. Give very short Answer.

1. What are the principles of 3R ?

Ans :

- ★ Reduce
- ★ Reuse
- ★ Recycle

2. What are the types of waste ?

Ans :

- ★ Liquid waste (in our drains)
- ★ Gases in air (Pollutants from factories)
- ★ Solid waste (Garbage)

Activity 1 : Think of the objects in your home. Just keep in mind, the books, toys, furniture, food materials and even pets of your home. These living and non-living things together make your home. Look at the following picture and list out the living and non-living things, in the pond.



Ans :

| Living things | Non - Living things |
|--|-------------------------------------|
| Lotus plant , Fish, Duck, Mosquito, Leech, Snail, Larva, Frog. | Stones, Water, Soil, Air, Sunlight. |

Activity : 2

Take a square paper. Fold its diagonals. Draw three lines in three triangles as shown in the picture.

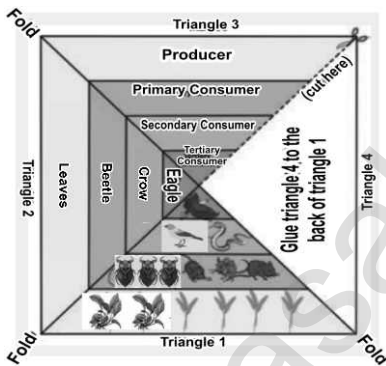
Cut from the edge of the diagonal to the center as shown in the picture.

If you fold this triangle and paste behind the third triangle you get a pyramidal shape.

In one of the triangles, draw images of each of the organisms in the different levels.

In another triangle write the names of the organisms. In the last triangle, write the energy level of the organism. Have a look at the following example. You must come up with different organisms!.

Ans :



Activity : 3

Take two mud pots or glass jars and fill them up with garden soil. In the first pot, mix wastes such as banana peel, some vegetable peels and a few tree leaves into the soil. In the second pot, mix a piece of plastic carry bag, sweet wrapper and metal foil into the soil.

What happen to the waste materials placed in both pots ? Do you notice a difference between first and second pot ? Observe the changes over two weeks and discuss with your classmates.

Ans :

- * In the first pot of the materials is biodegradable waste.
- * In the second pot of the materials is non-biodegradable waste.
- * In the first pot contains decomposed materials, and the second pot contains non decomposed materials.

Activity : 4

Student Activity.

IX. Questions based on Higher Order Thinking Skills**1. Desert does not have water. Why? Give the reason.**

Ans : ★ Desert usually get less than 10 inches of rainfall each year.

- ★ The evaporation rate is higher than the rainfall.
- ★ The plants and animals in the deserts get very less water for their needs.
- ★ Desert plants like cactus and animals like camel are adapted to save water and endure drought.

2. Kavitha said "Palm tree is a tall tree, so it gives hard wood " ! Do you agree with her statement or not ? Explain Why ?

Ans : ★ The statement of Kavitha that palm tree is a tall tree. so it gives hardwood is not agreeable to me.

- ★ Palm tree comes from Arecaceae family.
- ★ A palm tree is structurally neither hard wood nor soft wood.
- ★ It has significantly different cellular structure from either soft or hard woods.

3. Look at the diagram given below and answer the following questions.**a. Soil fertility is increased by bacteria How ?**

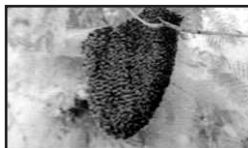
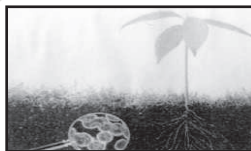
Ans : ★ Plant droppings and shedding of leaves, fruits and other parts are degraded by bacteria in the soil to form humus.

- ★ This humus increases soil fertility.
- ★ Plants like bacteria pseudomonas are extensively used to fix nitrogen in the soil for agriculture.
- ★ So they increase the soil fertility.

b) Honey bees are essential for the reproduction of the plants why ?

Ans : ★ Honey bees are attracted by the bright colour of flower, smell and honey.

- ★ As the bees go from one flower to another, they leave the pollen grains from their body.
- ★ This results in cross-pollination and the formation of vegetable and fruit.
- ★ So honey bees are essential for the reproduction of the plants.



Activity : 2

**How do Rava, Maida, Sago and Vermicelli are made ?
Discuss with your friends.**

**Ans :**

| | |
|------------|---|
| Rava | The refined product from maida is Rava. |
| Maida | Maida is the remains of refined wheat. |
| Sago | Tapioca is dried and Powdered. |
| Vermicelli | Prepared from Tapioca. |

Activity 3 : Ask your parents about the medicinal uses of plants such as Phylanthus, Vallarai, Black nightshade, Tippili, Vettiver, Thuthuvalai and make a write up. What are the other plants used for medicinal purpose in your area ?

Ans :

| Medicinal Plants | Medicinal Purpose |
|-------------------|--------------------------------------|
| Phylanthus | Cures Jaundice. |
| Vallarai | Increase Memory. |
| Black night shade | Cures Mouth and Peptic ulcer. |
| Tippili | Remedy for cough, wheezing problems. |
| Vettiver | Coolant for body. |
| Thuthuvalai | Enhances physical fitness. |
| Ginger | Cures gas troubles. |
| Asofoetida | It digest food. |

Activity : 4

See the book.

UNIT - 6. Hardware and Software

Evaluation

I. Choose the correct answer

1. Find out the part that is not found in CPU ?

- a) Mother Board b) SMPS
c) RAM d) Mouse

Ans : d) Mouse

2. Which of the following is correct ?

- a) Free and open source
b) Free and Traditional Software
c) Passive and Open source
d) Passive and Traditional source

Ans : a) Free and open source

3. LINUX is a

- a) Paid Software
b) Licensed Software
c) Free and Proprietary Software
d) Free and Open source software

Ans : d) Free and open source software

4. Find out Paid and Proprietary software from the given list

- a) Windows b) MAC OS
c) Adobe Photoshop d) All the above

Ans : d) All the above

5.....is a Operating System

- a) Android b) Chrome
c) Internet d) Pendrive

Ans : a) Android

II. Match the following

| | | |
|-------------|---|-------------------------------|
| 1. MAC OS | - | Free and Open source Software |
| 2. Software | - | Paid and Proprietary Software |
| 3. Hardware | - | Input Device |
| 4. Keyboard | - | RAM |
| 5. LINUX | - | Geogebra |

Answer :

| | | |
|--------------------|----------|--------------------------------------|
| 1. MAC OS | - | Paid and Proprietary Software |
| 2. Software | - | Geogebra |
| 3. Hardware | - | RAM |
| 4. Keyboard | - | Input Device |
| 5. LINUX | - | Free and Open source Software |

SELECTION

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