

Science

Unit No. 1

Classification of Living Things

Q1. Define classification of living things.

Ans: The process of sorting out living things into different groups on the basis of similarities and differences in their characteristics is called classification.

Q2. What are mammals?

Ans: Human beings, cows, goats, horses, tigers, cats, rabbits, etc. belong to a group of vertebrates called mammals. Mammals have hair on their bodies.

Q3. What are cotyledons?

Ans: Embryo bears one or two seed leaves called cotyledons. Cotyledons store food.

Q4. Differentiate between the following.

Ans: Vertebrates: Vertebrates are animals which have a backbone. Vertebrates are divided into five groups. i.e. fishes amphibian, reptiles, birds, and mammals.

Invertebrates: Animals which do not have back bone are called invertebrates. For example: snails, starfish and worms.

Monocot: Flowering plants whose seeds have only one cotyledon are called monocot plants. For examples: oat, wheat, rice etc.

Dicot: Flowering plants like rose, pea, bean etc, have two cotyledons in their seeds. They are called dicot plants.

Q5. Encircle the correct Options:

(i) b (ii) b (iii) c (iv) c (v) c (vi) b

Unit No. 4

Matter and Changes in its States

Q1. What is matter? Mention the states of matter.

Ans: All around us are substance that are made of matter that has mass and occupies space. Matter exists in three states, solid, liquid and gas.

Q2. Differentiate between boiling and evaporation of a liquid.

Ans: Boiling: If we heat a liquid continuously, the movement of its particles becomes faster and faster. The liquid begins to change into bubbles of vapours or gas.

Evaporation: The change of liquid state of matter into its gaseous state



without boiling is called evaporation.

Q3. When does matter change its state?

Ans: Matter can change its state when the temperature is changed.

Q4. How do solids differ from liquids with regard to particles arrangement?

Ans: Solids: The particles of solid substance are tightly packed with each other. Solids have fixed shape and fixed volume

Liquids: The attractive force between them are strong but weaker than solids.

Q5. Describe what happens when a solid is heated?

Ans: When a solid is heated, its particles start vibrating faster. On continuous heating, particles of the solid substance vibrate faster and faster. The forces of attraction between them become weaker and they begin to move away from each other.

Q6. Why does an ice cube melt at room temperature?

Ans: When ice cubes melt, they change their state solid ice becomes liquid water this is due to the heat energy absorbed by the ice cube from surroundings.

Q7. Encircle the correct Options:

(i) c (ii) c (iii) a (iv) (v) a (vi) d (vii) b

Q8. Fill in the blanks with suitable words:

(i) evo (ii) temp (iii) liquid (iv) Solid
(v) Freezing

Chapter No. 5 Forces and Machines

Q1. What are the causes of friction?

Ans: Roughness of two contact surface is the cause of friction.

Q2. State the advantages and disadvantages of friction?

Ans: Advantages and Disadvantages

Advantages	Disadvantages
When we write and rub a pencil on the paper, friction is produced due to which carbon particles leave on the paper.	Friction offers resistance to a moving object at high speed and reduces the speed of moving objects.
Friction between our shoes and the earth enables us to walk.	The moving parts of engines and machines which rub against each other becomes very hot.



Friction between the tyres of the vehicles and the ground enables them to stop when brakes are applied.	The sole of our shoes is worn out due to friction with the ground.
The reaction of pushed air enables the birds to fly	

Q3. Suggest some methods the reduce friction?

Ans: Friction can be reduced by the following methods:

- (i) **Polishing of surfaces:** Polishing of surface of the objects reduces the friction.
- (ii) **Using lubricants:** Use of lubricant (oil or grease) between the moving parts of machines can reduces friction.
- (iii) **Using rollers or wheels:** Rollers or wheels are used to pull a cart or a TV trolley on the floor. They reduce friction and make our work easier.
- (iv) **Using ball bearings:** Ball bearings changed sliding fraction into rolling friction. They are usually placed around an axle, so the rotation of the wheel becomes easier.
- (v) **Streamlining the bodies:** Cyclists use very narrow and hard tyres in their bicycles to reduce friction with the road. They wear tight dress and bend their bodies to give themselves a streamline shape. This shape faces minimum air friction when moving. Similarly, the swimmers also acquire streamlined shaped to reduce the water friction.

Q4. What do the cyclist and swimmers do to reduce friction?

Ans: Cyclists use very narrow and hard tyres in their bicycles to reduce friction with the road. They wear tight dress and bend their bodies to give themselves a streamline shape. This shape faces minimum air friction when moving. Similarly, the swimmers also acquire streamlined shaped to reduce the water friction.

Q5. Why does it become dangerous to walk on the wet or polished smooth floor?

Ans: It becomes dangerous to walk on a wet or polished smooth floor because there is very small friction.

Q6. Encircle the correct Options:

- (i) a (ii) c (iii) a (iv) c (v) c (vi) c (vii) b

Note: Science work given above will be done as it is on Science school copy. (learn also)

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