Class 7th

Science

Question/Answer

Chapter#1

Heating and Cooling

Q#1.Which materials make the best conductors of heat?

Ans: Metals are the best conductor of heat because heat can travel through them easily.

Q#2.What are the insulators? Name three insulators?

Ans: Poor conductors of heat are called insulators.

i) Air ii) Wood iii) Plastic

Q#3. Explain how heat is conducted along a metal bar?

Ans: If one end of a metal bar is heated the particles gain thermal energy and vibrate faster, This cause the particles next to them to vibrate faster as well Bit by Bit the increased vibration of particles is passed along the bar until the whole bar is hot. Heat has been conducted along the bar.

Q#4.What are heat? What are the units of heat?

Ans: Heat is the amount of energy that something possesses. It is measured in Joules (J) or Kilojoules (KJ).

Q#5.What is temperature? How temperature is measured?

Ans: Temperature is the amount of how cold or hot an object is.It is measured in degrees Celsius.

Q#6.What is absolute Zero?

Ans: The temperature at which the particles of a substance stop moving is

called absolute Zero.

Q#7.What is Kelvin scale?

Ans: The Kelvin Scale is a temperature scale starts from absolute zero.

Q#8.What happens to the moment of a particle in a liquid when it is heated?

Ans: In a liquid, the particles move faster as the temperature rises and the molecule further move apart and the liquid changes into the gases.

Q#9.What is given to the change of state from a liquid to gas?

(a) a liquid to a gas

Ans: Evaporation

(b) a solid to a liquid

Ans: Melting

(c) a gas to liquid

Ans: Condensation

(d) a liquid to solid

Ans: Freezing

Q#10.Where does the heat energy come from the melt an ice cube Which is left an Kitchen work surface?

Ans. From the atmosphere

Q#11.Why can liquid and gases carry heat?

Ans: Because there particles are free to move.

Q#12.Explain how heater warms all the like in a room?

Ans:Warm air is less dense than cold air,so the warm air above the heater rises and replaced by denser cold air.A convection current is set up and air

circulates around room.

Q#13.Why do you think Convection cannot happen in solid?

Ans: Convection cannot happen in solids because the particles are held in a frame work and cannot move around as they do in liquids and gas.

Q#14.Explain why

(a)In hot, Countries, houses are often painted white?

Ans: White or silvery surfaces are poor absorbers because they reflect most of the radiation .That's why in hot countries houses are often painted white to keep them cool inside.

(b).On a hot summers day the inside of a white car is cooler than inside of a black car?

Ans: Black car absorbs heat more quickly than white car.

(c).Aluminum foil helps keep food warm?

Ans: The silvery surfaces of aluminum are poor emitter of thermal radiation so the food remains warm.

(d) Central heating radiator's work better if they are painted black?

Ans: A dark surface absorbs heat more quickly than a shiny one.

Q#15.Suggest why the vacuum flask in commonly called a thermos flask?

Ans: The Thermos Company was first to produce vacuum flask for everyday use .That's why the vacuum flask is commonly called a thermos flask.

Q#16.Explain why a vacuum flask can keep drinks cold as well hot?

Ans: The vacuum flask has a number of features which reduce the rate of which heat flows in or out it.

Q#17.What is the vacuum flask?

Ans: A vacuum or thermos flask can keep drinks hot or cold for hours.

Q#18.

(a) Describe what happens to particles in a solid when it melts?

Ans: The heat is being used to allow solid particles to break away from their fixed position.

(b) Describe what happens to particles in a liquid when it evaporates?

Ans: The heat energy is used to allow liquid particles to break free completely.

Q#19.Describe what happens to water at 100˚c?

Ans: The liquid (water) is turning to a gas.

Q#18.What is Chemical Reaction?

Ans: A chemical change that occurs when two or more substances combine to form a new substance.

Q#19.What is Kinetic theory?

Ans: Theory that states that the more energy particles have, the faster they move.

Q#20.What is the of the continuous circulating stream?

Ans: Convection Current.

Q#21.What is the best conductors of heat?

Ans: Metals. For example Iron Nail, Copper Wire.

Chapter#2

Plants And Their Systems

Question/Answers

Q#1.List two jobs carried out by roots?

Ans:

i. Roots hold the plants in soil.

Ii.Roots absorbs water from soil.

Q#2.In many plants leave and flowers are held above the ground by the stem. Suggest a reason for this?

Ans: Leaves and flowers are held above the ground so that they can get sunlight.

Q#3.What do we call a group of cells that do the same jobs?

Ans: Cells that do the same jobs are called the tissue.

Q#5.Name four kinds of plant tissues?

Ans:

i. Photosynthetic tissues

ii. Xylem tissues

iii. Phloem tissues

iv. Protective tissues

Q#6.What is buds?

Ans: Buds are where growth start .Growth takes places at the tips of roots and shoots.

Q#8.Where does growth takes place in plant?

Ans: Growth takes place at the tips of roots and shoots.

Q#9.What is an Organ?

Ans: Different tissues combine to make organ. These organs together make a plant, which is an organism.

Q#7.Name each part of a plant and say what each one does?

Ans:

Roots:

Their job is to hold a plant in soil. They also take water and minerals from the soil.

Stem:

The stem keeps a plant upright and holds the leaves so they can get sunlight and exchange gases with the air.

Flowers:

Male and Female organ are present in the flowers .Flowers are usually brightly coloured and scented to attract insects.

Q#9.What is the transport system?

Ans: Roots and stems are plant organs which contain the transport system of a plant.

Q#10.What is the Vascular Bundles?

Ans: Xylem and Phloem tubes bundled together to form vascular bundles.

Q#11.Explain how Xylem tubes help to support a plant?

Ans: Xylem tube have thickened, strong walls which help to support a plant.

Q#12.What happens at the root tips?

Ans: Cells are growing at the roots tips.

Q#13.What is the job of root cap?

Ans: Root cap protects the growing root tip.

Q#14.What do leaves do?

Ans: Leaves are food factories of plants .They are where a plant makes food during photosynthesis.

Q#15.

(a) What are leaf Veins?

Ans: Leaf Veins are the vascular tissue of the leaf and are located on the mesophyll layers of plants.

(b) What are they for?

Ans: Leaf Veins provide 'skeleton' for the leaf as well as transport system.

Q#16.Explain why narrow leaves still do their jobs well?

Ans: Because narrow leaves have very thin layers of wall so gases can get to every cell such as in grass leaves.

Q#17.What makes a leaf water proof?

Ans: Cuticle is a layer of wax that makes a leaf waterproof.

Q#18 .Explain why the upper skin of a leaf is transparent?

Ans: The upper skin of a leaf is transparent due to get light through to the cells below.

Q#19.Why do growing shoots need sugar?

Ans: Growing shoots need sugar to get energy.

Q#20.Why do fruit taste sweet?

Ans: Because fruit contains sugar. That's why their taste is sweet.

Q#21.Why are the holes in the end of Phloem tubes?

Ans: These holes let the sugar solution up and down.

Q#22.Explain why the speed and direction of sugar solution moving in the phloem, change?

Ans: The speed and direction of the sugar solution depends how much is needed by the part of a plant and when.

Q#23.What is Osmosis?

Ans: The movement of water molecules from a higher concentration to a lower concentration level through partially permeable membrane.

Q#24.Explain why osmosis is a special kind of diffusion?

Ans: Because osmosis is only about the movement of water molecule.

Q#25.What is transpiration?

Ans: Transpiration is the process by which a plant loses water from its leaves into the surrounding air.

Q#26.What are stomata?

Ans: Lots of tiny holes present in the leaves are called stomata.

Q#27.List four things that affect the rate of transpiration?

Ans:

i. Temperature

ii.Wind

iii.Humidity

Iv.Time of day

Q#28.Why are flowers important to a plant?

Ans: Flowers contains the plants male and female organs .Mostly flowers brightly coloured and sweet smelling to attract insects.

Q#29.What is chloroplast?

Ans: The part of a plant cell that contains chlorophyll.

Q#30.What is guard cell?

Ans: The sausage-shaped cells which control the size of a stoma.

Q#31.What is ovule?

Ans: The part of plant that contains the female reproductive cell (gamete).

Q#32.What is organism?

Ans: Something that is able to survive on its own.

Q#33.What is partially permeable membrane?

Ans: Membrane which allows small molecules of water to pass through it, it does not allow large particles to pass.

Q#34.What is anther?

Ans: The part of a plant where pollen grains are made.

Unit#3

The Periodic Table

Question/Answers

Q#1.What is periodic table?

Ans: The periodic table is tabular arrangement of chemical element by increasing atomic number which displays the element so that one may see trends in their properties.

Q#2.Why do scientists currently believe an atom consist of?

Ans: Scientists currently believe that an atom consists of a dense nucleus surrounded by a cloud of negatively charged electrons. The nucleus contains positively charged protons and electrically neutral neutrons.

Q#3.What ideas gave by Dalton that everything is made of atom?

Ans: Dalton find out that water cloud only evaporate into the air. If water and air were made of particles that could mix together. He called these particles atoms.

Q#4.What are subatomic particles?

Ans: Particles that are smaller than the atom are called subatomic particle.

Three main subatomic particles are protons, neutrons and electrons.

i. Proton has positive charge

Ii.Electron has negative charge

Iii. Neutron is neutral

Q#5. Describe Thompson's atomic model?

Ans: In Thompson's atomic model most of the space in an atom is made up positively charged material with lots of tiny negatively charged electron scattered through it.

Q#6.What is atom?

Ans: Atom is fundamental building material of non-living thing .it is electrically neutral .It consist of dense nucleus surrounded by a negatively charged electron.

Q#7.What is atomic number?

Ans: Atomic number is equal to number of proton in an atom.

Q#8.What is mass number?

Ans: The sum of number of proton and number of neutron is called mass number.

Q#9.What is ion?

Ans: Atom loss or gain electron during chemical reactions and form an ion.if it loses electron ,it forms coating bearing positive charge and if it gain electron, it form anion bearing negative charge.

Q#10. Differenciate between groups and periods?

Groups	Periods

Ans:

The vertical column in periodic table are called group.	The horizontal rows in periodic table are periods.

Q#11.What is ionic compound?

Ans: Ionic compound form by gain of electron (anion) or loss of electron (cation).Metals lose electron and non-metals gain electron.

Q#12.What does the nucleus contains?

Ans: Nucleus contains proton and neutron in it.

Q#13.Define covalent compound?

Ans: If atoms share electron with each other. The form covalent compounds.