

**Revision Worksheet-Term-1- Session 2019-20**  
**Class- VIII, Subject- Science**  
**Topic- Cell- Structure and Function**

NAME \_\_\_\_\_

DATE \_\_\_\_\_

- Cell is the basic structural and functional unit of life.
- Structural organisation – Cell → Tissue → Organ → Organ system
- Cell was discovered by Robert Hooke in 1665.
- Cell theory was given by M.J. Schleiden and Theodore Schwann.
- Cell theory states that- (a) cell is a basic structural and functional unit of living organisms.  
 (b) cells differ in their basic structure and function .  
 (c) Cells arise from pre- existing cells.
- Organisms can be unicellular e.x. Amoeba, Paramecium and multicellular e.x. human beings, cat ,elephant
- Every cell has three major components: , plasma membrane , cytoplasm , DNA (naked in bacteria) enclosed by a nuclear membrane in all other organisms.
- Cells are of two types on the basis of their origin – prokaryotic and eukaryotic cells

Prokaryotic cells (P)ro = early/primitive	Eukaryotic cells (eu = true, karyon = nucleus)
<ul style="list-style-type: none"> <li>• Nucleus not distinct, it is in the form of nuclear membrane.</li> </ul>	<ul style="list-style-type: none"> <li>• Nucleus distinct, with well formed</li> </ul>
<ul style="list-style-type: none"> <li>• Double-membrane cell organelles absent.</li> </ul>	<ul style="list-style-type: none"> <li>• Double-membrane cell organelles present.</li> </ul>
<ul style="list-style-type: none"> <li>• 70 S ribosomes present.</li> </ul>	<ul style="list-style-type: none"> <li>• 80 S ribosomes present.</li> </ul>
<ul style="list-style-type: none"> <li>• Nuclear material is not well organised.</li> </ul>	<ul style="list-style-type: none"> <li>• Nuclear material is well organised.</li> </ul>

**Name the following-**

- (a) The sac like–structure which form the grana- \_\_\_\_\_
- (b) Power house” of the cell- \_\_\_\_\_
- (c) Organelle contains enzymes for cellular respiration- \_\_\_\_\_
- (d) Plastid that imparts colour to flower petals- \_\_\_\_\_

**Given below is a list of functions, relate them to their respective organelles:**

- (a) synthesis of some enzymes \_\_\_\_\_
- (b) storage of carbohydrates \_\_\_\_\_
- (c) Intracellular transport \_\_\_\_\_

(d) Synthesis of proteins - \_\_\_\_\_

**Q. What is the structural organisation in living organisms?**

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Q. What are the postulates of cell theory?

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**Q. Who discovered- (a) cell (b) Nucleus**

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**Q. Complete the table-**

Name of the organelle	Its importance
Nucleus	
Mitochondria	
Golgi complex	
Cell wall	

<b>Cell membrane</b>	
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**Q. What is cell division? Write its importance .**

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**Q. Draw well labelled diagram of (a) animal cell (b) plant cell**

<b>(a)</b>	<b>(b)</b>
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**Revision Worksheet-Term-1- Session 2019-20**  
**Class- VIII, Subject- Science**  
**Topic- Conservation of Biodiversity**

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NAME \_\_\_\_\_

DATE \_\_\_\_\_

- **Biodiversity** – is the variety of life including different species of plants, animals, and other living forms that live together in a specific region on the Earth.
- **An ecosystem** is made of all the plants, animals and microorganisms in an area along with non-living components such as climate, soil, rivers etc.
- **An ecosystem** includes two components-(A) **biotic**(living things) (b) **Abiotic** components(non-living things like soil ,air etc)
- Existence of plants and animals is **important** due to various reasons:
  - roots of the plants help in binding the soil and hence **prevent soil erosion**
  - forests are home to numerous plants and animal species,
  - forests maintain a balance between the oxygen and carbon dioxide levels in the atmosphere • forests also play role in the climate , wind and rainfall of the both locally and globally
  - Different plants and animals form vital links in food chains and food webs.Thus for the survival of the mankind and to maintain the natural ecological balance it is necessary to conserve biodiversity.
- **causes of the loss of biodiversity:**
  - (i) Increase in human population and use of land for agriculture and urban development leading to large scale destruction of forests resulting in **deforestation**.
  - (ii) Killing of animals for their meat, skin and other body parts
  - (iii) Pollution of air, water and land adversely affects many plants and animals.
  - (iv) Natural disasters like, earthquakes, cyclones etc
- **Consequences of deforestation** are many:
  - Deforestation results in the change in soil property gradually leading to **desertification**.
  - Falling of trees may also result in the increase in the temperature of the earth (**global warming**)
  - It also leads a disturbance in the water cycle and less rainfall resulting in drought.
  - Loss of trees decreases the water holding capacity of the soil. The movement of water from the soil surface into the ground is reduced leading to floods.

- **Terms associated with biodiversity:**

**Species:** a group or a class of animals and plants having certain common and permanent characteristics that clearly distinguish it from other groups.

**Flora and fauna:** numerous species of plants living in their natural surroundings (habitat) are termed as flora, and the animal species constitute the fauna. Together the flora and fauna form the biodiversity of the place.

**Extinct species:** species of plants and animals that are no longer existing.

**Endangered species:** These are at a high risk of getting extinct in their habitat in the near future.

**Endemic species:** species of plants and animals which are found exclusively in a particular area. A particular type of animal or plant may be endemic to a zone, a state or a country.

- To protect our flora and fauna and their habitats, **protected areas** called sanctuaries, national parks and biosphere reserves have been earmarked. Plantation, cultivation, grazing, felling trees, hunting and poaching are prohibited here. These protected areas include: national park ,sanctuaries and biosphere reserves .

National park	Wildlife sanctuaries
<p>The National park:</p> <ul style="list-style-type: none"> <li>• Only an approved person can enter into a national park, either via paying a visitor ticket or an approved letter from the governing body.</li> <li>• The visitors can only observe the park inside a vehicle that routes through defined trails.</li> <li>• Visitors cannot get down from the vehicle for any reason unless there is an approved place for visitors.</li> <li>• Photographs are allowed but research and educational work can only be done with a prior permission.</li> <li>• The park can not be used for any reason like. firewood, timber, fruits...etc.</li> <li>• The national parks are more restricted for the people but earn money that could be managed to develop nature conservation measures</li> </ul>	<p>The wildlife sanctuary is a declared protected area, where very limited human activity is allowed. Inside a wildlife sanctuary:</p> <ul style="list-style-type: none"> <li>• The hunting of animals is completely prohibited.</li> <li>• The trees cannot be cut down for any purpose.</li> <li>• The clearing of the forest for agriculture is completely banned.</li> <li>• People can collect firewood, fruits, medicinal plants and other stuff in small scale.</li> <li>• It's not physically fenced to restrict the public from entering and roaming inside a wildlife sanctuary for research, educational, inspirational, and recreational purposes is allowed.</li> </ul>

- **Biosphere reserves:** they are areas for conservation of biodiversity. The biosphere reserves help to maintain the biodiversity and culture of that area. The area covered by it is the largest and it can have a number of national parks and sanctuaries within its area.
- **Red data book** is the source book which keeps a record of all the endangered animals and plants.

**Q. Give two examples of each—**

(a) National parks --

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(b) Sanctuaries

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(c) Endangered species-

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(d) Endemic species in India-

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Q. Write advantages of maintaining red data book.

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Q. Shyam goes to a sanctuary. There he sees many animals. Suddenly he sees some hunters in the park. He immediately calls up the forest rangers and gets them arrested.

(a) Why are animals hunted?

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(b) What should we learn from Shyam?

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Q. What will happen if tigers become extinct oneday?

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Q. How does recycling of paper conserves natural resources?

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**Revision Worksheet-Term-1- Session 2019-20**  
**Class- VIII, Subject- Science**  
**Topic- Electricity and Circuits**

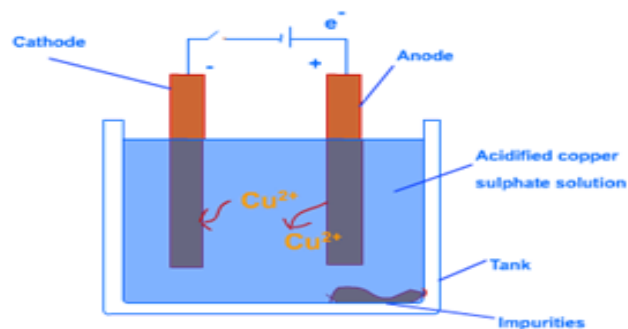
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NAME \_\_\_\_\_

DATE \_\_\_\_\_

- The flow of electrons from positive terminal to negative terminal is called electric current.
- **Good Conductors:** Electric current can easily pass through some materials. Such materials are called good conductors of electricity, e.g. iron, copper, silver, aluminium, gold, etc.
- **Bad Conductors:** Electric current cannot pass easily through some materials. Such materials are called bad conductors of electricity, e.g. rubber, wood, asbestos, plastic, etc.
- **LED:** It is the abbreviated form of Light Emitting Diode.
- **Electrode-**the rods that help in the flow of electric current in the electrolytic cell are called electrode.
- **Heating Effect of Electric Current:** When electric current passes through a conductor, it increases the temperature of the conductor. This is called heating effect of electric current. Many electrical appliances work on heating effect of electric current, e.g. electric bulb, water heater, electric iron, etc.
- **Chemical effect of the electric current:** The passage of an electric current through a conducting solution causes chemical reaction. That may cause formation of bubbles of a gas on the electrodes, deposits of metal on electrodes, changes of colour of solutions etc.
- **Liquids which are good conductors:** Some liquids too can conduct electricity, e.g. tap water, lemon juice, vinegar, salt solution, etc. Most of the liquids which conduct electricity are solutions of acid, base or salt.
- **Liquids which are bad conductors:** Some liquids are bad conductors of electricity, e.g. distilled water, honey, milk, vegetable oil, etc.
- Tap water conducts electricity because it contains various salts dissolved in it. Hence, it is advised not to touch an electric switch with wet hands.
- **Electroplating** The process of depositing a layer of a desired metal on any other material by means of electric current is called electroplating. Following steps are followed in electroplating
  - The material which needs to be coated with a layer is made the negative electrode (cathode).
  - The plate of desired metal is made the positive electrode (anode).
  - The conducting solution is made of a salt of desired metal.
  - Electric current is passed through the solution.
  - The desired metal dissociates from the plate (anode) and gets deposited on the material at negative electrode (cathode).





### Some Uses of Electroplating:

- Imitation jewelry is made by applying a layer of gold or silver.
- Applying a layer of chromium on an article by this method is called chrome plating. Parts of bicycle, motorbike and sanitary fittings are chrome plated by this method.
- Tin cans are made by electroplating tin on iron.
- Applying a layer of zinc on an article is called anodizing. Electric poles and beams on bridges are electroplated with zinc.
- Chrome plating and anodizing helps in preventing from corrosion.

### Answer the questions –

Q. Does pure water conduct electricity? If not, what can we do to make it conducting?

**Ans:** Pure water does not conduct electricity. By dissolving some salt, such as common salt, pure water can be made a conductor of electricity.

Q. In case of a fire, before the firemen use the water hoses, they shut off the main electrical supply for the area. Explain why they do this.

**Ans:** Normal water is good conductor of electricity. Therefore, firemen shut off the main electrical supply for the area before using of water hoses in the case of fire to prevent them from getting electric shock.

Q: A child staying in a coastal region tests the drinking water and also the seawater with his tester. He finds that the compass needle deflects more in the case of seawater. Can you explain the reason?

**Ans:** Since, seawater contains more salts dissolved in it, thus in the case of seawater, compass needle of the tester deflects more than the drinking water.

### Fill in the blanks-

- Electric bulb works on \_\_\_\_\_ effect of electric current.
- The flow of electrons from positive terminal to negative terminal is called \_\_\_\_\_.
- Metals have \_\_\_\_\_ resistance.
- The combination of two or more cells is called \_\_\_\_\_.
- \_\_\_\_\_ is the process of a layer of metal on another

(vi) An electric cell produces electric current from the \_\_\_\_\_ inside it.

(vii) The passage of an electric current through a solution causes \_\_\_\_\_ effects.

(viii) If you pass current through copper sulphate solution, copper gets deposited on the plate connected to the \_\_\_\_\_ terminal of the battery.

(ix) The process of depositing a layer of any desired metal on another material by means of electricity is called \_\_\_\_\_.

Q. Define the terms-

(a) Electrical conductivity-

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(b) Electrolysis

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(c) Electrode

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Q. Draw the diagram showing electroplating.

**Revision Worksheet-Term-1- Session 2019-20**  
**Class- VIII, Subject- Science**  
**Topic- Force and Pressure**

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NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Force: push or pull**

**PUSH:** Applied force intended to drive.

**PULL:** Action which acts in direction of the origin of force.

Forces are described as push or pull on an object.

**Force:** a push or a pull on an object is called force. Force may impart motion to an object.

Force can –change the direction of motion , speed , shape of an object, stop a moving object or make a stationary object move.

- **Magnitude:** the strength of a force is usually expressed by its magnitude. It is measured in Newton(N).
- State of motion: The state of motion of an object is described by its speed and the direction of motion.
- **Muscular Force:** The force resulting due to the action of muscles is known as the muscular force.
- **Contact Force:** The force which is applied when it is in the contact with the object.
- **Non-contact force:** The force exerted on an object without touching it known as noncontact force.
- **Gravitational force:** the attractive force of earth which acts upon all the objects is called force of gravity or gravitational force.
- **Pressure:** The force acting on a unit area of a surface is called pressure. It is measured in Pascal (Pa).
- Pressure= force/area( $F/A$ ) on which it acts. Lesser the area, greater is the force.
- Both liquids and gases exert pressure on the wall of their containers.
- **Atmospheric pressure:** The pressure due to the atmosphere is known as atmospheric pressure. This weight of air column over a unit  $1\text{cm}^2$ . **Barometer is used to measure atmospheric pressure.**

Q: What do you understand by state of motion?

**Ans:** A force can change the state of motion. Both rest and motion are called states of motion. When an object is at rest, its speed is zero.

Q. Explain friction.

**Ans:** When one surface is moving over another surface, a force comes into play and opposes their relative motion. This force is called friction or force of friction. Friction always opposes motion because it acts in

opposite direction to motion. Force of friction arises due to contact between two surfaces. If there is not contact between two surfaces there would be no friction.

Q. 3: Why is it easier to push a nail in a wooden plank through its pointed end?

**Ans:** It is easier to push a nail into a wooden door through its pointed end than through its blunt end, because small area of the pointed end helps in creating more pressure and it becomes easier to insert the nail.

**Q. What is the difference between contact and non contact forces?**

Contact force	Non-contact force
This force needs to touch the object in order to exert its effect.	This force does not need to touch the object in order to exert its effect.
Example: muscular force, friction	Example: magnetic force, electrostatic force

**Q. Choose the correct option –**

- What is force?
  - pull
  - push
  - push and pull both
  - none of these
- What is state of motion?
  - position of rest
  - position of motion
  - both by the state of rest or motion
  - none of these
- The strength of force is expressed by?
  - weight
  - mass
  - magnitude
  - longitudinal force
- The force between two charged bodies is called
  - muscular force
  - gravitational force
  - magnetic force
  - electrostatic force
- When two forces act in opposite directions, then net force acting two forces
  - sum of two factors
  - difference between two factors
  - both of these
  - none of these
- Magnetic force is-
  - contact force
  - non-contact force
  - both a and b
  - none of these
- Force acts on an object may change
  - direction
  - shape
  - speed
  - all of above
- Leaves or fruits fall on the ground due to
  - magnetic force
  - gravitational force
  - electrostatic force
  - muscular force

**Q. Give Scientific reason –**

(a) Tyres of tractor are very wide.

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(b) A camel can walk easily on sand but a man finds it difficult .

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(c) Eskimos wear ski-like shoes.

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**Q. What are the effects of force on moving objects?**

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**Q. Explain characteristics of force.**

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**Revision Worksheet-Term-1- Session 2019-20**  
**Class- VIII, Subject- Science**  
**Topic- Friction**

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NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Q.1 Choose the correct option-**

1. Which of the following is not used to reduce friction?

- (a) ball bearing                      (b) lubricant                      (c) air cushion                      (d) saw dust

2. The cause of friction between two surfaces in contact is-

- (a) size of the object                      (b) area of the surface of object  
(c) roughness of surfaces in contact                      (d) shape of the object

3. When two surfaces are rubbed against each other-

- (a) heat is produced    (b) wear and tear takes place    (c) surfaces become smooth    (d) nothing happens

4. On decreasing the weight of an object, friction

- (a) decreases                      (b) increases                      (c) remains unaltered                      (d) vanishes

5. Streamlining reduces-

- (a) static friction                      (b) sliding friction                      (c) rolling friction                      (d) fluid friction

6. Which of the following is not true about friction?

- (a) It wears down an eraser                      (b) It helps us to walk  
(c) It helps a ship to sail through water                      (d) It heats up our palms when rubbed.

7. The hinges of a creaking door are oiled to

- (a) to keep them clean                      (b) to keep them rust free  
(c) to maintain their shine                      (d) to reduce noise and wear and tear

8. The easiest way to shift a heavy carton from one place to another is –

- (a) tie it with rope and pull                      (b) ask more labourers to push it  
(c) Put it on trolley                      (d) Split it up into parts

9. A car skids on a wet road because –

- (a) water increases the friction between road and tyres
- (b) water decreases the friction between road and tyres
- (c) it is not possible to apply brakes on wet road
- (d) brakes are ineffective on wet road

10. It is not possible to open a bottle's lid with oily hands because due to friction-

- (a) surface becomes sticky
- (b) surface becomes rough
- (c) surface becomes smooth and slippery
- (d) none of these.

**Q. Fill in the blanks with an appropriate lubricant used in each of the following cases :-**

- a. Asha removes her bangles easily by applying \_\_\_\_\_ on her hands.
- b. Rashi puts some \_\_\_\_\_ on the carom board.
- c. Piyush applied \_\_\_\_\_ on the chains of his bicycle to prevent wear and tear.
- d. \_\_\_\_\_ in our mouth helps us to swallow food.

**Q. Give reason for the following-**

- a) Aircrafts and ships have pointed fronts.

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- b) A piece of chalk gets smaller on repeated use.

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- c) The handles of a motorcycle are covered with a rubber sheet with spikes.

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Q. State two factor on which force of friction depends.

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Q. Mention two ways each of (a) increasing friction (b) decreasing friction

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Revision Worksheet-Term-1- Session 2019-20

Class- VIII, Subject- Science

Topic- Metals and Non metals

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NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Element-** it is the simplest and purest form of a substance made up of only one kind of atoms.

**Types of elements-** metals , non-metals and metalloids

**Properties of Metals** – (a) solid at room temperature (except mercury& gallium)

(b) Hard and strong (except sodium &potassium)

(c) have lustre

(d) are malleable(can be drawn into sheets) and ductile (can be beaten into wires)

(e) sonorous-produce sound on striking with an object

(f) have high density , high melting and boiling points

(g) are good conductors of heat and electric current

**Non metals** – may be liquid or gas at room temperature ,generally soft, do not have lustre, are neither malleable nor ductile, are non –sonorous, have comparatively low temperature, low density.

**Matelloids-** these elements show properties of metals as well as non-metals.

**Reaction of metals and non-metals with different compounds-**

Metal+ Oxygen -----→ metal oxide

Metal + water -----→ metal oxide/metal hydroxide + Hydrogen gas

Metal + dilute acid -----→ metal salt + Hydrogen gas

Metals + bases -----→ salt + Hydrogen gas

**Displacement reactions-** a reaction in which a lesser reactive metal is replaced by a more reactive metal from the aqueous solution of its salt is known as displacement reaction.

**E.x. copper sulphate + iron** -----→ iron sulphate + copper ( in this reaction copper being less reactive is replaced by iron. )

**Reactivity series of metals---(most to least reactive)** potassium ----sodium ----calcium-----magnesium -----aluminium ----zinc----iron ----tin ----lead -----copper ----mercury ----silver ----gold

**Corrosion-** is the process when they get eaten up when they come in contact with air and moisture present in the atmosphere.

**Rusting-** it is corrosion of iron .

**Rusting can be prevented by** By plating with tin or chromium, greasing oiling the surfaces, galvanisation etc.

**Revision Worksheet-Term-1- Session 2019-20**  
**Class- VIII, Subject- Science**  
**Topic- Sound**

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NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Sound:** Sound is a form of energy which travels as waves and gives us the sense of hearing. Sound is produced by a vibrating body. E.x. When a bell is hit by a gong, the bell starts to vibrate and produces sound.

**Vibration:** The to and fro or back and forth motion in an object is called vibration or oscillation. Traditional musical instruments produce sound because of vibration in some of their parts.

### **Sound Produced by Humans**

Sound is produced by voice box or larynx; in human beings. The voice box or larynx is situated in the upper part of wind pipe. There are two vocal cords stretched across the larynx in way that there is a small gap between them. When air is forced through the gap, vocal cords begin to vibrate and sound is produced. Muscles which are attached to the vocal cord enable us to make the vocal cords tight or loose as per need. Sound quality varies according to tension or slack in the vocal cords.

The vocal cords in men are longer (about 20 mm), but they are shorter in women and children. Due to this, voices of men, women and children are different from each other.

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### **Sound Needs a Medium for Propagation**

Sound needs a medium through which it can travel. Sound cannot travel through vacuum. Sound can travel through solid, liquid. Propagation of sound happens in all directions in a medium. when sound waves are produced they vibrate the particles of the medium and sound waves have low and high pressure regions called as rarefactions and compressions.

### **Human Ear**

Human ear; which gives us the sense of hearing is a complex structure. It can be divided into three main parts, viz. external ear, middle ear and internal ear.

- a. **External Ear:** The external ear or pinna appears like a funnel. Its function is to catch sound waves and to direct them towards middle ear.
- b. **Middle Ear:** The middle ear is composed of a stretched membrane and three small bones. The stretched membrane is called the ear drum and small bones are called bony ossicles. These are named sequentially from outside to inside as; malleus, incus, and stapes (hammer, anvil, and stirrup). When sound wave comes to the middle ear, it sets vibrations in the ear drum. After that, sound waves are transferred from ear drum transfers these vibrations to the three bones.

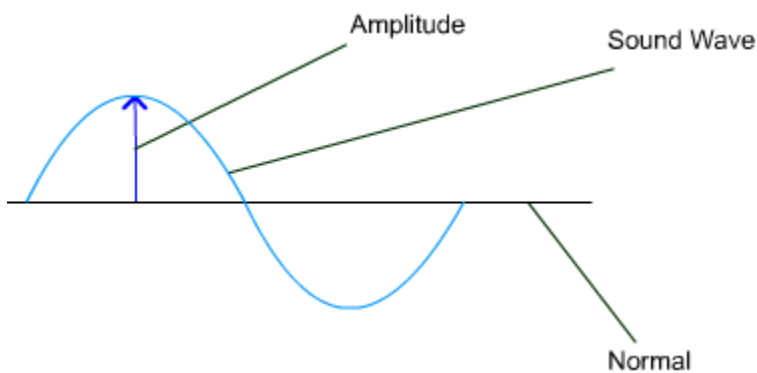
- c. **Internal Ear:** The internal ear is composed of cochlea and semi-circular canals. Cochlea appears like a snail from outside. Vibrations from middle ear reach the cochlea. Signals from cochlea reach the brain through auditory nerves. Semi-circular canals have no role in sense of hearing; rather they maintain the balance of the body.

### Characteristics of Vibrations

Vibration is also called oscillatory motion or oscillation. It has certain unique characteristics which are as follows:

**Frequency:** Number of oscillations in unit time is called frequency of oscillation. Frequency is expressed as Hertz (Hz). When an object is vibrating 1 time in a second, its frequency is 1 Hz.

**Amplitude:** Maximum displacement of a wave on either side from mean position is called amplitude. Thus, amplitude shows how far the vibrating object moves from the mean position.



**Loudness of Sound:** Loudness of sound **depends on amplitude** of vibration. Loudness of sound is directly proportional to square of amplitude of vibration. Louder sound has higher amplitude, while quieter sound has lower amplitude. Loudness is expressed in terms of decibel. Loudness of some common sounds is in the following table.

The noise becomes physically painful above 80 dB.

**Pitch of Sound:** Pitch of sound **depends on frequency** of vibration. A high pitched sound has high frequency, while a low pitched sound has low frequency. Children and women generally produce sound with high pitch.

### Audible and Inaudible Sounds

Human beings can hear sounds between frequencies 20 Hz and 20,000 Hz. This range of frequencies is called the hearing range for humans. The sound with frequency below 20 Hz is called infrasound. On the other hand, the sound with frequency above 20,000 Hz is called ultrasound.

**Noise and Music:** A sound which is pleasant to ears is called music. But any unpleasant sound is called noise.

**Noise Pollution:** Presence of excess noise in environment is called noise pollution. Automobiles, factories, loud music, construction works, firecrackers, stone factories etc. are sources of noise pollution.

**Effects of Noise Pollution:** Continuous exposure to noise pollution can result in lack of sleep (insomnia), hypertension (high blood pressure), anxiety and many other disorders. Noise pollution can also lead to partial loss of hearing; in some cases.

Measures to Limit Noise Pollution:

- Aircraft engines and automobile engines should be fitted with silencing devices. The muffler (or silencer) in a motorcycle is an example of such device.
- Factories should be relocated far from residential areas. Many factories from Delhi had been shifted to outskirts in the nineties.
- Trees should be planted along the roads because trees absorb noise.
- Sound barrier should be installed along flyovers.

**Hearing Impairment:** Loss of hearing is called hearing impairment. It can be total or partial, but total hearing impairment is rare. Total hearing impairment is usually congenital, i.e. by birth. A person with hearing impairment can learn sign language to communicate with others. Hearing aids can be used by people who are suffering from partial hearing impairment.

**Answer the questions-**

Question 1: What is sound?

**Answer:** Sound is a kind of wave which gives us sense of hearing.

Question 2: What is vibration?

**Answer:** The to and fro or back and forth motion of an object is called vibration.

Question 3: Humans produce voice from which organ?

**Answer:** Voice box

Question 4: What do you understand by frequency of a vibration?

**Answer:** Number of oscillations per second is called frequency of oscillation.

Question 5: What do you understand by amplitude?

**Answer:** Maximum displacement of a wave from mean position is called amplitude.

Question 6: Which type of sound is called music?

**Answer:** A sound which is pleasant to ears is called music.

**Fill in the blanks:-**

- a. A rapid back and forth movement of a body about a mean position is called \_\_\_\_\_.
- b. The pitch is determined by the \_\_\_\_\_ of the vibrating body.
- c. Sound cannot travel through \_\_\_\_\_.
- d. Sound travels \_\_\_\_\_ than light.
- e. Vibrations of frequency less than 20 Hz are called \_\_\_\_\_.
- f. The number of vibrations completed in 1 second is called \_\_\_\_\_.
- g. The unpleasant and irritating sounds are called \_\_\_\_\_.
- h. The shrillness of sound depends upon \_\_\_\_\_.

**State whether the following statements are true or false. Rewrite the correct statement-**

- a. The audible range of frequency is 20-20,000 Hz.
- 

- b. The louder the sound, the lesser is the amplitude of a vibrating body.
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- c. A medium is not necessary for the propagation of sound.
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- d. Time in which the vibrating particle completes one vibration is called the time period.
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- e. Loudness and duration of a sound determines the amount of noise pollution.
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**Circle the odd one out -**

- a. amplitude, frequency, time period, Hertz
- b. Violin, bursting cracker, electric drill, honking vehicle
- c. bats, dogs, human beings, deer, monkeys

**Revision Worksheet-Term-1- Session 2019-20**  
**Class- VIII, Subject- Science**  
**Topic- Sound**

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NAME \_\_\_\_\_

DATE \_\_\_\_\_

**Production of sound** -In humans, sound is produced by the organ called \_\_\_\_\_ or larynx. It is located at the upper end of the \_\_\_\_\_. Inside the voice box, \_\_\_\_\_vocal cords are stretched across such that it leaves a narrow slit between them for the passage of air. When the lungs force air through the slit, the vocal cords \_\_\_\_\_producing sound.\_\_\_\_\_ of sound produced depends on whether the -----are tight or loose. Muscles attached to the vocal cords can make them tight or loose. The sound is further modulated by the air chamber of mouth and nose.

**Some points to remember:-**

- Sound travels \_\_\_\_\_ in gases, faster in liquids and \_\_\_\_\_ in solids.
- Sound \_\_\_\_\_ travel through vacuum.
- Speed of sound in ----- is 340 m/s approximately. It changes with atmospheric conditions like temperature, atmospheric pressure, humidity, etc.
- Speed of light in air/vacuum =  $3 \times 10^8$  m/s

**Characteristics of sound –**

1. Loudness – It depends on the \_\_\_\_\_ of vibrations. Large amplitudes produce loud sounds whereas small amplitudes produce soft sound.

2. Pitch – Pitch of a note depends upon the \_\_\_\_\_ of the sound. A high pitch sound has high frequency and vice versa.

High pitch » high frequency » sharp, shrill voice. Eg.

Women 's voice Low pitch » low frequency » heavy,

hoarse, blunt voice. Eg. Men's voice

**Characteristics of vibration / oscillation-**

**Amplitude** : The maximum displacement from the mean position is called the amplitude. Its SI unit is metre (m).

**Time – period (T)** : Time taken to complete one oscillation / vibration is called the time period. Its SI unit is second (s).

**Frequency (f)** : Number of oscillations in 1 second is known as frequency. Its SI unit is Hertz (Hz).  
Relationship between  $f$  and T  $f = 1 / T$

Answer the questions-

Q. Extreme loud sounds can make one deaf. Explain why?

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Q. Suggest 5 measures which can minimize noise pollution in a residential area.

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Q. What are the harms caused by noise pollution?

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Draw a well labelled diagram of the Human ear.