

GLOSSARY OF PHYSICS TERMS

Absolute zero The theoretical lowest temperature possible, which occurs when all random motion of molecules has ceased.

Acceleration due to gravity The acceleration produced in a body due to the earth's attraction is called acceleration due to gravity. It is denoted by the letter g . Its SI unit is m/s^2 . On the surface of the earth, its average value is 9.8m/s^2 . The value of g on the surface of the earth increases in going towards the poles from the equator. The acceleration due to gravity of the earth decreases with altitude and with depth inside the earth. The value of g at the center of the earth is zero.

Acceleration The rate of change of velocity of a moving object is called its acceleration. The SI units of acceleration are m / s^2 . By definition, this change in velocity can result from a change in speed, a change in direction, or a combination of changes in speed and direction.

Alpha particle The nucleus of a helium atom (two protons and two neutrons) emitted as radiation from a decaying heavy nucleus; also known as an alpha ray.

Alternating current An electric current that first moves one direction, then the opposite direction with a regular frequency.

Ampere Unit of electric current. It is equivalent to coulomb/sec.

Amplitude (of waves) The maximum displacement of particles of the medium from their mean positions during the propagation of a wave is called the amplitude of the wave.

Amplitude (of an oscillation) The maximum displacement of a body from its mean position during an oscillatory motion is called the amplitude of oscillation.

Angle of incidence Angle of an incident (arriving) ray or particle to a surface; measured from a line perpendicular to the surface (the normal).

Angle of reflection Angle of a reflected ray or particle from a surface; measured from a line perpendicular to the surface (the normal).

Atom The smallest unit of an element that can exist alone or in combination with other elements.

Atomic number The number of protons in the nucleus of an atom.

Axis The imaginary line about which a planet or other object rotates.

Background Radiation Ionizing radiation (alpha, beta, gamma, etc.) from natural sources.

Balanced Forces When a number of forces act on a body, and the resultant force is zero, then the forces are said to be resultant forces.

Barometer An instrument that measures atmospheric pressure, used in weather forecasting and in determining elevation above sea level.

Beat Rhythmic increases and decreases of volume from constructive and destructive interference between two sound waves of slightly different frequencies.

Beta particle High-energy electron emitted as ionizing radiation from a decaying nucleus; also known as a beta ray.

Boiling point The temperature at which a phase change of liquid to gas takes place through boiling. It is the same temperature as the condensation point.

Cathode rays Negatively charged particles (electrons) that are emitted from a negative terminal in an evacuated glass tube.

Celsius scale of temperature In the Celsius scale of temperature, the ice-point is taken as taken as the lower fixed point (0 deg C) and the steam-point is taken as the upper fixed point (100 deg C). The interval between the ice point and steam point is divided into 100 equal divisions. Thus, the unit division on this scale is 1degC. This scale was earlier called the centigrade scale. $1 \text{ deg C} = \frac{9}{5} \text{ deg F}$.

Centigrade Alternate name for the Celsius scale.

Centrifugal force An apparent outward force on an object following a circular path that. This force is a consequence of the third law of motion.

Centripetal force The force required to pull an object out of its natural straight-line path and into a circular path; centripetal means.

Circular Motion The motion of a body along a circular path is called circular motion.

Compression A part of a longitudinal wave in which the density of the particles of the medium is higher than the normal density is called a compression.

Condensation (water vapor) Where more vapor or gas molecules are returning to the liquid state than are evaporating.

Condensation point the temperature at which a gas or vapor changes back to a liquid.

Conduction The transfer of heat from a region of higher temperature to a region of lower temperature by increased kinetic energy moving from molecule to molecule.

Convection Transfer of heat from a region of higher temperature to a region of lower temperature by the displacement of high-energy molecules-for example, the displacement of warmer, less dense air (higher kinetic energy) by cooler, denser air (lower kinetic energy).

Conventional current Opposite to electron current-that is, considers an electric current to consist of a drift of positive charges that flow from the positive terminal to the negative terminal of a battery.

Coulomb Unit used to measure quantity of electric charge; equivalent to the charge resulting from the transfer of 6.24 billion particles such as the electron.

Crest The point of maximum positive displacement on a transverse wave is called a crest.

Critical angle Limit to the angle of incidence when all light rays are reflected internally.

Deceleration See retardation

Destructive interference The condition in which two waves arriving at the same point at the same time out of phase add amplitudes to create zero total disturbance. (also see constructive interference).

Diffraction The bending of light around the edge of an opaque Object.

Direct current An electrical current that always moves in one Direction.

Direct proportion When two variables increase or decrease together in the same ratio (at the same rate).

Dispersion The effect of spreading colors of light into a spectrum with a material that has an index of refraction that varies with wavelength

Displacement The change in the position of an object in a particular direction is called displacement. Displacement may also be defined as the shortest distance between the initial and final position of a moving body. It is a vector quantity.

Distance The actual length of the path traveled by a body irrespective of the direction is called the distance traveled. It is a scalar quantity.

Echo A reflected sound that can be distinguished from the original sound, which usually arrives 0.1 sec or more after the original sound

Electric circuit Consists of a voltage source that maintains an electrical potential, a continuous conducting path for a current to follow, and a device where work is done by the electrical potential; a switch in the circuit is used to complete or interrupt the conducting path

Electric current The flow of electric charge electric field force field produced by an electrical charge

Electric field lines A map of an electric field representing the direction of the force that a test charge would experience; the direction of an electric field shown by lines of force

Electric generator A mechanical device that uses wire loops rotating in a magnetic field to produce electromagnetic induction in order to generate electricity

Electric potential energy Potential energy due to the position of a charge near other charges

Electrical conductors Materials that have electrons that are free to move throughout the material; for example, metals

Electrical energy A form of energy from electromagnetic interactions; one of five forms of energy-mechanical, chemical, radiant, electrical, and nuclear

Electrical force A fundamental force that results from the interaction of electrical charge and is billions and billions of times stronger than the gravitational force

Electrical insulators Electrical nonconductors, or materials that obstruct the flow of electric current

Electrical nonconductors Materials that have electrons that are not moved easily within the material-for example, rubber; electrical nonconductors are also called electrical insulators

Electrical resistance The property of opposing or reducing electric current

Electrolyte Water solution of ionic substances that conducts an electric current

Electromagnet A magnet formed by a solenoid that can be turned on and off by turning the current on and off

Electromagnetic force One of four fundamental forces; the force of attraction or repulsion between two charged particles

Electromagnetic induction Process in which current is induced by moving a loop of wire in a magnetic field or by changing the magnetic field

Electromagnetic waves The waves which are due to oscillating electrical and magnetic fields and do not need any material medium for their propagation are called electromagnetic waves. These waves can, however, travel through material medium also. Light waves, radio waves are examples of electromagnetic waves. All electromagnetic waves travel in vacuum with a speed of 3×10^8 m/s.

Electron current Opposite to conventional current; that is, considers electric current to consist of a drift of negative charges that flows from the negative terminal to the positive terminal of a battery

Electron Subatomic particle that has the smallest negative charge possible and usually found in an orbital of an atom, but gained or

lost when atoms become ions.

Electrostatic charge An accumulated electric charge on an object from a surplus or deficiency of electrons

Element A pure chemical substance that cannot be broken down into anything simpler by chemical or physical means; there are over 100 known elements, the fundamental materials of which all matter is made

Energy The capacity of a body to do work is called its energy. Energy is a scalar quantity. The SI unit of energy is Joule.

Evaporation Process of more molecules leaving a liquid for the gaseous state than returning from the gas to the liquid. It can occur at any given temperature from the surface of a liquid. Evaporation takes place only from the surface of the liquid. Evaporation causes cooling. Evaporation is faster if the surface of the liquid is large, the temperature is higher and the surrounding atmosphere does not contain a large amount of vapor of the liquid.
healthy person is 37 deg C or 98.6 deg F.

First law of motion Every object remains at rest or in a state of uniform straight-line motion unless acted on by an unbalanced force

Fluids Matter that has the ability to flow or be poured; the individual molecules of a fluid are able to move, rolling over or by one another

Force Force is a push or pull which tends to change the state of rest or of uniform motion, the direction of motion, or the shape and size of a body. Force is a vector quantity. The SI unit of force is Newton, denoted by N. One N is the force which when acts on a body of mass 1 kg produces an acceleration of 1 m/s².

Force of gravitation The force with which two objects attract each other by virtue of their masses is called the force of gravitation. The force of attraction acts even if the two objects are not connected to each other. It is an action-at-a-distance force.

Free fall The motion of a body towards the earth when no other force except the force of gravity acts on it is called free fall. All freely falling bodies are weightless.

Freezing point The temperature at which a phase change of liquid to solid takes place; the same temperature as the melting point for

a given substance

Frequency (of waves) The number of waves produced per second is called its frequency.

Frequency (of oscillations) The number of oscillations made by an oscillating body per second is called the frequency.

Friction The force that resists the motion of one surface relative to another with which it is in contact. The cause of friction is that surfaces, however smooth they may look to the eye, on the microscopic scale have many humps and crests. Thus the actual area of contact is very small indeed, and the consequent very high pressure leads to local pressure welding of the surface. In motion the welds are broken and remade continually.

g Symbol representing the acceleration of an object in free fall due to the force of gravity; its magnitude is 9.80 m/sec^2 (32.0 ft/sec^2)

Gamma ray Very short wavelength electromagnetic radiation emitted by decaying nuclei

Gases A phase of matter composed of molecules that are relatively far apart moving freely in a constant, random motion and have weak cohesive forces acting between them, resulting in the characteristic indefinite shape and indefinite volume of a gas compound

Gravitational constant G The constant G which appears in the equation for Newton's law of gravitation is called the universal constant of gravitation or the gravitational constant. Numerically it is equal to the force of gravitation, which acts between two bodies of mass 1kg each separated by a distance of 1m. The value of G is $6.67 \times 10^{-11} \text{ Nm}^2/\text{kg}^2$.

Greenhouse effect The process of increasing the temperature of the lower parts of the atmosphere through redirecting energy back toward the surface; the absorption and reemission of infrared radiation by carbon dioxide, water vapor, and a few other gases in the atmosphere

Ground state Energy state of an atom with electrons at the lowest energy state possible for that atom

Half-life The time required for one-half of the unstable nuclei in a radioactive substance to decay into a new element

Heat Heat is a form of energy, which makes a body hot or cold. Heat is measured by the temperature-effect it produces in any

material body. The SI unit of heat is Joule(J).

Horsepower Measurement of power defined as a power rating of 550 ft-lb/sec

Hypothesis A tentative explanation of a phenomenon that is compatible with the data and provides a framework for understanding and describing that phenomenon

Ice-point It is the melting point of pure melting ice under 1 atm pressure. The ice point is taken as the lower fixed point (0 deg C or 32 deg F) for temperature scales.

Incident ray Line representing the direction of motion of incoming light approaching a boundary

Index of refraction The ratio of the speed of light in a vacuum to the speed of light in a material

Inertia The property of matter that causes it to resist any change in its state of rest or of uniform motion. There are three kinds of inertia- inertia of rest, inertia of motion and inertia of direction. The mass of a body is a measure of its inertia.

Insulators Materials that are poor conductors of heat-for example, heat flows slowly through materials with air pockets because the molecules making up air are far apart; also, materials that are poor conductors of electricity, for example, glass or wood

Interference Phenomenon of light where the relative phase difference between two light waves produces light or dark spots, a result of light's wavelike nature

Intermolecular forces Forces of interaction between molecules

Internal energy Sum of all the potential energy and all the kinetic energy of all the molecules of an object

Inverse proportion The relationship in which the value of one variable increases while the value of the second variable decreases at the same rate (in the same ratio)

Ionization Process of forming ions from molecules

Ionized An atom or a particle that has a net charge because it has

gained or lost electrons

Isostasy A balance or equilibrium between adjacent blocks of crust

Isotope Atoms of an element with identical chemical properties but with different masses; isotopes are atoms of the same element with different numbers of neutrons

Joule Metric unit used to measure work and energy; can also be used to measure heat; equivalent to newton-meter

Kelvin scale of temperature On this scale, the ice-point (the lower fixed point) is taken as 273.15K and the (the upper fixed point) is taken as 373.15K. The interval between these two points is divided into 100 equal parts. Each division is equal to 1K.

Kilocalorie The amount of energy required to increase the temperature of one kilogram of water one degree Celsius: equivalent to 1,000 calories

Kilogram The fundamental unit of mass in the metric system of Measurement

Kinetic Energy Energy possessed by a body by the virtue of its motion is called kinetic energy. $\text{Kinetic energy} = \frac{1}{2} m v^2$

Latent heat of vaporization The heat absorbed when one gram of a substance changes from the liquid phase to the gaseous phase, or the heat released when one gram of gas changes from the gaseous phase to the liquid phase

Latent heat of fusion The quantity of heat required to convert one unit mass of a substance from solid to the liquid state at its melting point (without any change in its temperature) is called its latent heat of fusion (L). The SI unit of latent heat of fusion is J kg⁻¹.

Latent heat Refers to the heat hidden in phase changes

Law of Conservation of Energy The change of one form of energy into another is called transformation of energy. For example, when a body falls its potential energy is converted to kinetic energy.

Light-year The distance that light travels through empty space in one year, approximately 9.5×10^{11} km

Liquids A phase of matter composed of molecules that have interactions stronger than those found in a gas but not strong enough to keep the molecules near the equilibrium positions of a solid, resulting in the characteristic definite volume but indefinite shape of a liquid

Liter A metric system unit of volume, usually used for liquids

Longitudinal waves The wave in which the particles of the medium oscillate along the direction along the direction of propagation of wave is called the longitudinal wave. Sound waves are longitudinal waves.

Loudness A subjective interpretation of a sound that is related to the energy of the vibrating source, related to the condition of the transmitting medium, and related to the distance involved

Luminous An object or objects that produce visible light; for example, the sun, stars, light bulbs, and burning materials are all luminous

Magnetic field Model used to describe how magnetic forces on moving charges act at a distance

Magnetic poles The ends, or sides, of a magnet about which the force of magnetic attraction seems to be concentrated

Magnitude The size of a measurement of a vector; scalar quantities that consist of a number and unit only, no direction

Mass number The sum of the number of protons and neutrons in a nucleus defines the mass number of an atom; used to identify isotopes; for example, Uranium 238

Mass The quantity of matter contained in a body is called its mass. The SI unit of mass is kg. The mass of a body remains the same everywhere. It is a measure of inertia, which means a resistance to a change of motion

Matter Anything that occupies space and has mass

Mechanical energy The form of energy associated with machines, objects in motion, and objects having potential energy that results from gravity

Melting point The temperature at which a phase change of solid to liquid takes place; the same temperature as the freezing point for a given substance

Metal Matter having the physical properties of conductivity, malleability, ductility, and luster

Meter The fundamental metric unit of length

Millibar A measure of atmospheric pressure equivalent to 1.000 dynes per cm ²

Mixture Matter made of unlike parts that have a variable composition and can be separated into their component parts by physical means

Model A mental or physical representation of something that cannot be observed directly that is usually used as an aid to understanding

Mole An amount of a substance that contains Avogadro's number of atoms, ions, molecules, or any other chemical unit; a mole is thus 6.02×10^{23} atoms, ions, or other chemical units

Momentum Momentum is considered to be a measure of the quantity of motion in a body. The momentum of a body is defined as the product of its mass and velocity. Its SI units are kg m /s.

Natural frequency The frequency of vibration of an elastic object that depends on the size, composition, and shape of the object

Negative electric charge One of the two types of electric charge; repels other negative charges and attracts positive charges

Negative ion Atom or particle that has a surplus, or imbalance, of electrons and, thus, a negative charge

Newton A unit of force defined as kg.m/sec²; that is, a 1 Newton force is needed to accelerate a 1 kg mass 1 m/sec²

Newton's first law of motion A body continues in a state of rest or of uniform motion in a straight line unless it is acted upon by an external (unbalanced) force.

Newton's second law of motion The rate of change of momentum is equal to the force applied OR the force acting on a body is directly proportional to the product of its mass and acceleration produced

by the force in the body.

Newton's third law of motion To every action there is an equal and opposite reaction. The action and reaction act on two different bodies simultaneously.

Non Uniform Acceleration When the velocity of a body increases by unequal amounts in equal intervals of time, it is said to have nonuniform acceleration.

Non Uniform Speed When a body travels unequal distances in equal intervals of time then it is said to have non-uniform speed.

Non Uniform Velocity When a body covers unequal distances in equal intervals of time in a particular direction, or when it covers equal distances in equal intervals but changes its direction it is said to have non uniform velocity.

Normal A line perpendicular to the surface of a boundary

Nuclear energy The form of energy from reactions involving the nucleus, the innermost part of an atom

Nuclear fission Nuclear reaction of splitting a massive nucleus into more stable, less massive nuclei with an accompanying release of energy

Nuclear force One of four fundamental forces, a strong force of attraction that operates over very short distances between subatomic particles; this force overcomes the electric repulsion of protons in a nucleus and binds the nucleus together

Nuclear fusion Nuclear reaction of low mass nuclei fusing together to form more stable and more massive nuclei with an accompanying release of energy

Nuclear reactor Steel vessel in which a controlled chain reaction of fissionable materials releases energy

Nucleons Name used to refer to both the protons and neutrons in the nucleus of an atom

Nucleus Tiny, relatively massive and positively charged center of an atom containing protons and neutrons; the small, dense center of an atom numerical constant a constant without units; a number

Ohm Unit of resistance; equivalent to volts/amps

Ohm's law The electric potential difference is directly proportional to the product of the current times the resistance

Physical change A change of the state of a substance but not the identity of the substance pitch the frequency of a sound wave

Positive electric charge One of the two types of electric charge; repels other positive charges and attracts negative charges

Positive ion Atom or particle that has a net positive charge due to an electron or electrons being torn away

Potential Energy Energy possessed by a body by the virtue of its position or configuration is called potential energy. There are two types of potential energies, gravitational and elastic. The potential energy of a body by virtue of its height from the ground is called its gravitational potential energy. The potential energy of a body by virtue of its configuration (shape) is called its elastic potential energy.

Power The rate of doing work is called power. Power is a scalar quantity. The SI unit of power is Watt ($1 \text{ W} = 1 \text{ J/sec}$)

Pressure Defined as force per unit area; for example, pounds per square inch (lb/in^2)

Primary coil Part of a transformer; a coil of wire that is connected to a source of alternating current

Pulse A wave of short duration confined to a small portion of the medium at any given time is called a pulse. A pulse is also called a wave pulse.

Radiant energy The form of energy that can travel through space; for example, visible light and other parts of the electromagnetic spectrum

Radiation The transfer of heat from a region of higher temperature to a region of lower temperature by greater emission of radiant energy from the region of higher temperature

Radioactive decay The natural spontaneous disintegration or decomposition of a nucleus

Radioactivity Spontaneous emission of particles or energy from an atomic nucleus as it disintegrates

Rarefaction A part of a longitudinal wave in which the density of the particles of the medium is less than the normal density is called a rarefaction.

Real image An image generated by a lens or mirror that can be projected onto a screen

Reflected ray A line representing direction of motion of light reflected from a boundary

Reflection The change when light, sound, or other waves bounce backwards off a boundary

Refraction A change in the direction of travel of light, sound, or other waves crossing a boundary

Resultant Force A single force, which acts on a body to produce the same effect in it as, done by all other forces collectively, is called the resultant force.

Retardation Negative acceleration is called retardation. In retardation the velocity of a body decreases with time.

Saturated solution The apparent limit to dissolving a given solid in a specified amount of water at a given temperature; a state of equilibrium that exists between dissolving solute and solute coming out of solution

Scalar Quantity A physical quantity, which is described completely by its magnitude, is called a scalar quantity.

Second law of motion The acceleration of an object is directly proportional to the net force acting on that object and inversely proportional to the mass of the object

Second The standard unit of time in both the metric and English systems of measurement

Secondary coil Part of a transformer, a coil of wire in which the voltage of the original alternating current in the primary coil is stepped up or down by way of electromagnetic induction

Second's Pendulum A simple pendulum whose time period on the surface of earth is 2 seconds is called the second's pendulum.

Semiconductors Elements that have properties between those of a metal and those of a nonmetal sometimes conducting an electric current and sometimes acting like an electrical insulator depending on the conditions and their purity; also called metalloids

Simple Pendulum A heavy point mass (actually a small metallic ball), suspended by a light inextensible string from a frictionless rigid support is called a simple pendulum. A simple pendulum is a simple machine based on the effect of gravity.

Solenoid A cylindrical coil of wire that becomes electromagnetic when a current runs through it

Solids A phase of matter with molecules that remain close to fixed equilibrium positions due to strong interactions between the

molecules, resulting in the characteristic definite shape and definite volume of a solid

Specific heat Each substance has its own specific heat, which is defined as the amount of energy (or heat) needed to increase the temperature of one gram of a substance one degree Celsius

Speed The distance traveled by a body in one unit of time is called its speed. If a body covers distance s in time t then its speed is given by s / t . It is a scalar quantity and its SI unit's are m / s .

Standing waves Condition where two waves of equal frequency traveling in opposite directions meet and form stationary regions of maximum displacement due to constructive interference and stationary regions of zero displacement due to destructive interference

State of Motion When a body changes its position with respect to a fixed point in its surroundings then it is said to be in a state of motion. The states of rest and motion are relative to the frame of reference.

State of Rest When a body does not change its position with respect to a fixed point in its surrounding, then it is said to be in a state of rest. The states of rest and motion are relative to the frame of reference.

Steam-point It is the temperature of steam over pure boiling water under 1 atm pressure. The steam point is taken as the upper fixed point (100 deg C or 212 deg F) for temperature scales.

Temperature It is a numerical measure of hotness or coldness of a body. According to the molecular model, it is a measure of the average kinetic energy of the molecules of the body. Heat flows from a body at higher temperature to a body at lower temperature.

Tensional stress The opposite of compressional stress; occurs when one part of a plate moves away from another part that does not move

Thermal Capacity The quantity of heat required to raise the temperature of the whole body by one degree (1K or 1deg C) is called its thermal capacity.

Thermal Expansion The increase in the size of an object on heating is called thermal expansion.

Thermometer It is a device used for numerical measurement of temperature. The commonly used thermometer is mercury thermometer.

Third law of motion Whenever two objects interact, the force exerted on one object is equal in size and opposite in direction to the force exerted on the other object; forces always occur in matched pairs that are equal and opposite

Time Period (of a wave) The time taken by a wave to travel through a distance equal to its wavelength is called its time period. It is denoted by T . Time period of a wave = $1/\text{frequency of the wave}$.

Time Period (of an oscillation) The time taken to complete one oscillation is called the time period of an oscillation. The time period of a pendulum does not depend upon the mass of the bob and amplitude of oscillation. The time period of a pendulum is directly proportional to the square root of the length and inversely proportional to the square root of the acceleration due to gravity.

Total internal reflection Condition where all light is reflected back from a boundary between materials; occurs when light arrives at a boundary at the critical angle or beyond

Transverse waves A wave in which the particles of the medium oscillate in a direction perpendicular of the direction of propagation of wave is called the transverse wave. Water waves, light waves and radio waves are examples of transverse waves.

Ultrasonic Sound waves too high in frequency to be heard by the human ear; frequencies above 20,000Hz

Unbalanced forces When a number of forces act on a body and the resultant force is not zero, then the forces are said to be unbalanced.

Uniform Acceleration When the velocity of a body increases by equal amounts in equal intervals of time it is said to have uniform acceleration.

Uniform Circular Motion The motion of an object in a circular path with uniform speed is called uniform circular motion. Uniform circular motion is accelerated motion.

Uniform Speed When a body travels equal distances in equal intervals of time then it is said to have uniform speed.

Uniform Velocity When a body travels along a straight line in particular direction and covers equal distances in equal intervals of time it is said to have uniform velocity.

Vapour The gaseous state of a substance that is normally in the liquid state

Vector Quantity A quantity, which needs both magnitude and direction to describe it, is called a vector quantity. Such a physical quantity should also follow the vector law of addition.

Velocity Distance traveled by a body in a particular direction per unit time is called its velocity. It can also be defined as the displacement of the body per unit time. It is a vector quantity. The SI units of velocity are m / s.

Vibration A back and forth motion that repeats itself

Virtual image An image where light rays appear to originate from a mirror or lens; this image cannot be projected on a screen

Volt Unit of potential difference equivalent to joules/coulomb

Voltage drop The electric potential difference across a resistor or other part of a circuit that consumes power

Watt Metric unit for power; equivalent to joule/sec

Wave motion The movement of a disturbance produced in one part

of a medium to another involving the transfer of energy but not the transfer of matter is called wave motion.

Wave period The time required for two successive crests or other successive parts of the wave to pass a given point

Wave velocity The distance traveled by a wave in one second is called the wave velocity. The wave velocity of a wave depends upon the nature of the medium through which it passes.

Wave (mechanical) A periodic disturbance produced in a material medium due to the vibratory motion of the particles of the medium is called a wave.

Wave A disturbance or oscillation that moves through a medium

Wavelength The distance between the two nearest points on a wave, which are in the same phase, is called the wavelength of the wave. The distance between two adjacent crests or two adjacent troughs is called its wavelength.

Weight The force with which a body is attracted towards the center of the earth is called its weight. The SI unit of weight is N. The gravitational units of weight are kg-wt and g-wt. The weight of a body of mass m is given by mg . Its value will depend upon the value of g at that place. The weight of a body is measured with a spring balance.

Work Work is done when a force acting on a body displaces it. Work is a scalar quantity. The SI unit for work is Joule.