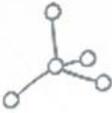


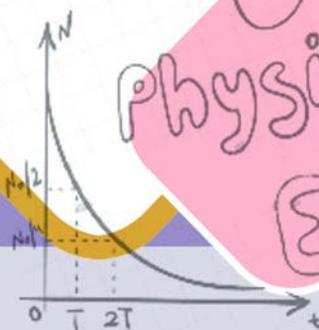
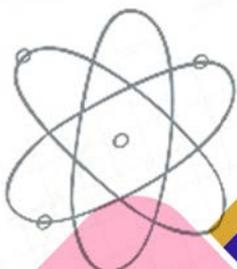
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Physics

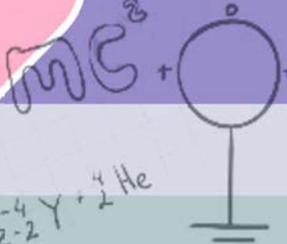
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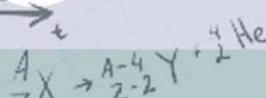
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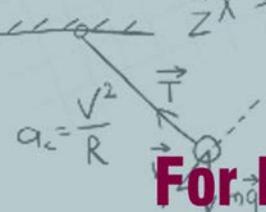

$$N = N_0 \times 2^{-\frac{t}{T}}$$



Physics

$$E = mc^2$$





$$\alpha_c = \frac{v^2}{R}$$

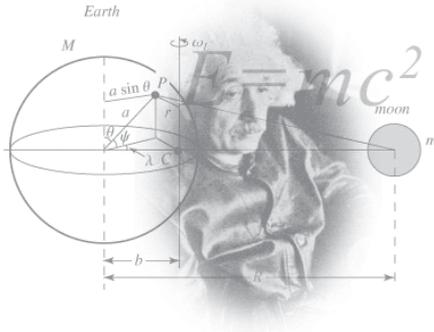
For High School &
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NAVARATNA

PHYSICS DICTIONARY

English - English

For High School & College Students



Editor :

Gopu Ramu M.Sc (comp)

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PHYSICS DICTIONARY

A: - Abbreviation for “ampere” a unit of electrical current.

Abbreviated K.: A unit of absolute temperature. Zero degrees Celsius is equal to 273.16 Kelvin.

Abbreviated km: 1 km = 1000 meters = 105 cm = 0.62 mile.

Abbreviated UT: The same as Greenwich Mean Time (GMT) in England. Eastern Standard Time (EST) is five hours earlier than Universal Time.

Abscissa.:- The value corresponding to the horizontal distance of a point on a graph from the Y axis. The X coordinate.

Absolute deviation: The difference between a single measured value and the average of several measurements made in the same way.

Absolute error: The actual difference between a measured value and its accepted value.

Absolute Zero

Absolute Zero: The lowest possible temperature in the universe, at which all atomic activity ceases. Equal to -273 degrees Celsius (-459 degrees Fahrenheit). Used as a benchmark for measuring temperature. Or The temperature of a body at which the kinetic energy of its molecules is at a minimum; 0°K or -273.16°C .

Or Lowest possible temperature at which gas would have a zero volume.

Absorption spectrum: A continuous spectrum interrupted by dark lines or bands that are characteristic of the medium through which the radiation has passed. Or spectrum of electromagnetic radiation absorbed by matter when radiation of all frequencies is passed through it.

Absorption: Loss or dissipation of energy as it travels through a medium, Example: radio waves lose some of their energy as they travel through the atmosphere.

AC coupling: Circuit that passes an AC signal while blocking a DC voltage.

AC generator: Device used to transform mechanical energy into AC electrical power.

AC load line: A graph representing all possible combinations of AC output voltage and current for an amplifier.

AC power supply: Power supply that delivers an AC voltage.

AC voltage: A voltage in which the polarity alternates.

AC: Abbreviation for "Alternating Current"

Active component

AC/DC: Equipment that will operate on either an AC or DC power source.

Acceleration: Time rate of change of velocity. Or
Change in velocity divided by time interval over which it occurred.

Accelerator: A machine that serves as a source for a well-defined beam of high speed particles for studies in nuclear science and high energy (or particle) physics.

Acceptor atoms: Trivalent atoms that accept free electrons from pentavalent atoms.

Acceptor: An element with three valence electrons per atom which when added to a semiconductor crystal provides electron “holes” in the lattice structure of the crystal.

Accuracy: Closeness of a measurement to the standard value of that quantity. Or

Closeness of a measurement to the accepted value for a specific physical quantity; expressed in terms of error.

Accuracy: closeness of a measurement to the standard value of that quantity.

Achromatic Lens: Lens for which all light colors have the same focal length.

Action-Reaction Forces: Pair of forces involved in an interaction that are equal in magnitude and opposition in direction.

Active component: A component that changes the amplitude of a signal between input and output.

Active filter

Active filter: A filter that uses an amplifier in addition to reactive components to pass or reject selected frequencies.

Active region: The region of BJT operation between saturation and cutoff used for linear amplification.

Activity: Number of decays per second of a radioactive substance.

ADC: - Abbreviation for “analog to digital converter”

Adhesion: Force of attraction between two unlike materials. Or
Musicals

Adiabatic process: A thermal process in which no heat is added to or removed from a system.

Admittance: (symbol “Y”) Measure of how easily AC will flow through a circuit. Admittance is the reciprocal of impedance and is measured in siemens.

AF: Abbreviation for “audio frequency”.

AFC: Abbreviation for “automatic frequency control”.

AGC: Abbreviation for “automatic gain control”

Air Resistance: Force of air on objects moving through it.

Alkaline cell: A primary cell that delivers more current than a carbon-zinc cell. Also known as an “alkaline manganese cell”.

Alligator clip: Spring clip on the end of a test lead used to make a temporary connection.

Alpha Decay: Process in which a nucleus emits an alpha particle.

Alpha Particle: Positively- charged particles consisting of two protons and two neutrons emitted by radioactive materials.

Amplifier

Or A helium-4 nucleus, especially when emitted from the nucleus of a radioactive atom.

Alpha: Ratio of collector current to emitter current in a bipolar junction transistor (BJT). Greek letter alpha “ α ” is the symbol used.

Alternating current: An electric current that rises to a maximum in one direction, falls back to zero and then rises to a maximum in the opposite direction and then repeats.

Or An electric current that has one direction during one part of a generating cycle and the opposite direction during the remainder of the cycle.

Alternator: Name for an AC generator.

AM: Abbreviation for “amplitude modulation”

Ammeter: - Device to measure electrical current.

Amorphous solid: Solids that have no long range order; no crystal structure.

Amount of energy equal to 3.6×10^6 J. Usually used in electrical measurement.

Ampere: Unit of electric current; one ampere is the flow of one coulomb of charge per second.

Or Unit of electrical current.

Amplifier: A circuit that increases the voltage, current, or power of a signal. Or A device consisting of one or more vacuum tubes (or transistors) and associated circuits, used to increase the strength of a signal.

Analog

Or In any periodic motion, the maximum displacement from equilibrium. An operational amplifier circuit having no phase inversion between the input and output.

Analog: Information represented as continuously varying voltage or current rather than in discrete levels as opposed to digital data varying between two discrete levels.

Angle of Incidence: Angle between direction of motion of waves and a line perpendicular to surface the waves are striking.

Or The angle between the incident ray and the normal drawn to the point of incidence.

Angle of Reflection: Angle between direction of motion of waves and a line perpendicular to surface the waves are reflected from.

Or The angle between the reflected ray and the normal drawn to the point of incidence.

Angstrom: Abbreviated Å. A unit of length equal to 10^{-8} cm (one-hundredth of a millionth of a centimeter). An Angstrom is on the order of the size of an atom.

Or A unit of linear measure equal to 10^{-10} m.

Angular acceleration: The time rate of change of angular velocity.

Angular impulse: The product of a torque and the time interval during which it acts.

Antinode

Angular Momentum: Quantity of rotational motion. For a rotating object, product of moment of inertia and angular velocity.
Or The product of the rotational inertia of a body and its angular velocity.

Angular velocity: The time rate of change of angular displacement.

Annihilation: Process in which a particle and its antiparticle are converted into energy.

Anode: - The positive electrode or terminal of a device. The “P” material of a diode.

Or (1) The positive electrode of an electric cell. (2) The positive electrode or plate of an electronic tube. (3) “The electron-poor electrode.

Antenna: Device used to receive or transmit electromagnetic waves.

Antenna, receiving: A device that converts a radiated electromagnetic wave into an electrical wave.

Antenna, transmitting: A device that converts an electrical wave into an electromagnetic wave that radiates away from the antenna.

Antimatter: A substance composed of antiparticles.

Antineutrino: Subatomic particle with no charge or mass emitted in beta decay.

Antinode: point of maximum displacement of two superimposed waves.

Antiparticle

Antiparticle: A metal that when cooled below a critical temperature has a total disappearance of electrical resistance. Twenty-five elements and many alloys and compounds have been found to be superconducting. The critical temperatures range from .002 k to 18K

Or A counterpart of a subatomic particle having opposite properties (except for equal mass).

Aperture: Any opening through which radiation may pass. The diameter of an opening that admits light to a lens or

Apparent power: Power attained in an AC circuit as a product of effective voltage and current which reach their peak at different times.

Or The product of the effective values of alternating voltage and current.

Arc Degree: A unit of angular measure in which there are 360 arc degrees in a full circle.

Arc Second: Abbreviated arcsec. A unit of angular measure in which there are 60 arc seconds in 1 arc minute and therefore 3600 arc seconds in 1 arc degree. One arc second is equal to about 725 km on the Sun.

Arc tangent: The inverse function to the tangent. Symbol: arctan or \tan^{-1} . Interpretation: "An angle whose tangent is

Atomic mass unit

Arc: Discharge of electricity through a gas such as lightning discharging through the atmosphere.

Archimedes' Principle: Object immersed in a fluid has an upward force equal to the weight of the fluid displaced by the object.

Armature: The rotating or moving component of a magnetic circuit.

Or A coil of wire formed around an iron or steel core that rotates in the magnetic field of a generator or motor.

Armstrong oscillator: An oscillator that uses an isolation transformer to achieve positive feedback from output to input.

Artificial Radioactivity: Radioactive isotope not found in nature.

Astable multivibrator: An oscillator that produces a square wave output from a DC voltage.

Atom: A point-like particle with a negative charge; member of the lepton group and thus not divisible into more fundamental particles.

Or The smallest particle that an element can be broken down into and still maintain its unique identity.

Atomic mass unit: Unit of mass equal to $1/12$ the atomic mass of carbon-12 nucleus. Or One-twelfth of the mass of carbon-12, or $1.6605655 \times 10^{-27}$ kg.

Atomic model in which only probability of locating electron is known.

Atomic number

Atomic number: Number of protons in the nucleus of the atom.
Or The number of positive charges or protons in the nucleus of an atom.

Atomic weight: The weighted average of the atomic masses of an element's isotopes based on their relative abundance.

Attenuate: To reduce the amplitude of an action or signal. The opposite of amplification.

Audio signal: The alternating voltage proportional to the sound pressure produced in an electric circuit.

Audio: Relating to frequencies that can be heard by the human ear. Approximately 20 Hz. to 20 kHz.

Autotransformer: A single winding transformer where the output is taken from taps on the winding.

AVC: Abbreviation for "automatic volume control"

Average Acceleration: Acceleration measured over a finite time interval

Average value: A value of voltage or current where the area of the wave above the value equals the area of the wave below the value.

Average velocity: Velocity measured over a finite time interval.
Or Total displacement divided by elapsed time.

Avionics: Aviation electronics.

AWG: Abbreviation for "American wire gauge". A gauge that assigns a number value to the diameter of a wire.

B

Back emf: An induced emf in the armature of a motor that opposes the applied voltage. Or Potential difference across a conductor caused by change in magnetic flux.

Balanced bridge: Condition that occurs when a bridge circuit is adjusted to produce a zero output.

Band spectrum: An emission spectrum consisting of fluted bands of color. The spectrum of a substance in the molecular state.

Band Theory: Theory explaining electrical conduction in solids.

Band-pass filter - A tuned circuit designed to pass a band of frequencies between a lower cut-off frequency (f_1) and a higher cut-off frequency (f_2). Frequencies above and below the pass band are heavily attenuated.

Bandwidth: Width of the band of frequencies between the half power points.

Barometer: A device used to measure the pressure of the atmosphere.

Barrier potential: The natural difference of potential that exists across a forward biased pn junction.

Baryon: Subatomic particle composed of three quarks. Interacts with the strong nuclear force.

Or A subatomic particle with a large rest mass, e.g., the proton.

Baryon: subatomic particle composed of three quarks. Interacts with the strong nuclear force.

End of Preview.

Rest of the book can be read @

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