Physics Terms Study Sheet

1.	absolute zero	The lowest temperature possible, where no thermal energy remains in a substance.
2.	acceleration	The rate of change of velocity per unit of time.
3.	alternating current	An electric current that reverses its direction periodically.
4.	amplitude	The maximum extent of a vibration or displacement.
5.	antiparticle	A subatomic particle having the same mass as a given particle but opposite electric or magnetic properties.
6.	atom	The basic unit of a chemical element.
7.	battery	A device that stores chemical energy and converts it to electrical energy.
8.	black hole	A region of space having a gravitational field so intense that no matter or radiation can escape.
9.	Bohr	Scientist known for his model of the atom.
10.	capacitor	A device used to store an electric charge.
11.	cathode	The negatively charged electrode.
12.	chain reaction	A reaction in which the products themselves spread the reaction.
13.	circuit	A closed loop that allows current to flow.
14.	conductor	A material that allows the flow of electrical current.
15.	cosmology	The science of the origin and development of the universe.
16.	current	The flow of electric charge.
17.	dark matter	A type of matter hypothesized to account for a large part of the total mass in the universe.
18.	density	Mass per unit volume of a substance.
19.	diffraction	The bending of waves around obstacles.
20.	doppler	Effect observed when the source of a wave moves relative to an observer.
21.	dynamics	The study of the forces and motion of objects.
22.	electricity	The set of physical phenomena associated with the presence and motion of electric charge.
23.	electromagnetic wave	A wave of electric and magnetic fields that propagates through space.
24.	electromagnet	A type of magnet in which the magnetic field is produced by an electric current.

25.	electron	A subatomic particle with a negative charge.
26.	energy	The capacity to do work.
27.	entropy	A measure of disorder in a system.
28.	event horizon	The boundary of a black hole beyond which no radiation or matter can escape.
29.	fermion	A particle, such as a proton or neutron, that follows Fermi-Dirac statistics.
30.	force	An interaction that causes an object to change motion.
31.	frequency	The number of cycles per unit time.
32.	friction	The resistance to motion of one object moving relative to another.
33.	fusion	The process of combining two nuclei to form a heavier nucleus.
34.	galaxy	A system of millions or billions of stars.
35.	Geiger counter	A device for measuring radioactivity.
36.	graviton	A hypothetical quantum of gravitational energy.
37.	gravity	The force that attracts a body towards the center of the Earth.
38.	heat	The transfer of thermal energy.
39.	Hertz	The unit of frequency, equal to one cycle per second.
40.	Hubble	Scientist known for his discovery of the expansion of the universe.
41.	inertia	The resistance of any physical object to any change in its velocity.
42.	insulator	A material that does not allow the flow of electric current.
43.	isotope	Atoms of the same element with different numbers of neutrons.
44.	joule	The unit of work or energy in the International System of Units.
45.	Kelvin	The base unit of temperature in the International System of Units.
46.	Kepler	Scientist known for his laws of planetary motion.
47.	kinetic	Relating to or resulting from motion.
48.	laser	A device that emits light through a process of optical amplification.
49.	laser beam	A narrow, focused beam of light produced by a laser.
50.	light	Electromagnetic radiation that can be perceived by the human eye.

51.	magnet	An object that produces a magnetic field.
52.	mass	The quantity of matter in a body.
53.	mechanics	The branch of physics dealing with motion and forces.
54.	momentum	The product of the mass and velocity of an object.
55.	neutron	A subatomic particle with no electric charge.
56.	Newton	Scientist who formulated the laws of motion.
57.	nuclear fission	The process of splitting a nucleus into smaller parts.
58.	nuclear fusion	The process of combining nuclei to form a heavier nucleus.
59.	nucleus	The central part of an atom.
60.	optics	The study of light and its interactions with matter.
61.	oscillation	Movement back and forth at a regular speed.
62.	parallax	The apparent displacement of an object because of a change in the observer's point of view.
63.	photon	A particle representing a quantum of light.
64.	photoelectric effect	The emission of electrons when light shines on a material.
65.	Planck	Scientist known for his quantum theory.
66.	plasma	The fourth state of matter, consisting of ionized gas.
67.	polarization	The orientation of the oscillations in a wave.
68.	potential	The energy possessed by a body due to its position.
69.	power	The rate at which work is done.
70.	pressure	The force exerted per unit area.
71.	proton	A subatomic particle with a positive charge.
72.	quark	A type of elementary particle and a fundamental constituent of matter.
73.	quantum	The minimum amount of any physical entity involved in an interaction.
74.	radioactive decay	The process by which an unstable atomic nucleus loses energy.
75.	radiation	The emission of energy as electromagnetic waves.
76.	redshift	The phenomenon where the wavelength of light is stretched.
77.	reflection	The return of light or sound waves from a surface.
78.	refraction	The bending of a wave when it enters a medium where its speed is different.
79.	relativity	The theory developed by Einstein explaining the relationships between space, time, and gravity.

80.	resistance	The opposition to the flow of electric current.
81.	resonance	The reinforcement or prolongation of sound by reflection or by the synchronous vibration of a neighboring object.
82.	scalar	A quantity possessing only magnitude.
83.	SchrÃ¶dinger	Scientist known for his contributions to quantum mechanics.
84.	semiconductor	A material that has a conductivity between that of an insulator and that of most metals.
85.	singularity	A point in space-time where density becomes infinite.
86.	sound	Vibrations that travel through the air or another medium and can be heard.
87.	space-time	The four-dimensional continuum of space and time in which events occur.
88.	spectrum	The band of colors produced when sunlight is passed through a prism.
89.	speed	The rate at which someone or something moves.
90.	static	Having no motion.
91.	string theory	A theoretical framework in which particles are one-dimensional objects.
92.	superconductor	A material that can conduct electricity without resistance.
93.	supernova	A powerful and luminous explosion of a star.
94.	synchrotron radiation	Electromagnetic radiation emitted when charged particles are accelerated radially, often observed in particle accelerators.
95.	tesla	The unit of magnetic flux density.
96.	thermodynamics	The branch of physical science that deals with the relations between heat and other forms of energy.
97.	theory of everything	A hypothetical single, all-encompassing framework that fully explains and links together all physical aspects of the universe.
98.	torque	A twisting force that tends to cause rotation.
99.	transformer	A device that transfers electrical energy between two or more circuits.
100.	transistor	A semiconductor device used to amplify or switch electronic signals.
101.	tunneling	A quantum mechanical phenomenon where particles move through a barrier.
102.	ultraviolet	Electromagnetic radiation with a wavelength shorter than that of visible light.

103. uncertainty principle	The principle that it is impossible to know both the position and momentum of a particle with absolute precision.
104. vacuum	A space devoid of matter.
105. velocity	The speed of something in a given direction.
106. virtual particle	A particle that exists for a limited time during interactions between real particles.
107. voltage	The electric potential difference between two points.
108. watt	The unit of power in the International System of Units.
109. wave	A disturbance that travels through a medium.
110. wave-particle duality	The concept that every particle or quantum entity exhibits both wave and particle properties.
111. wavelength	The distance between successive crests of a wave.
112. weak force	One of the four fundamental forces of nature, responsible for radioactive decay.
113. weight	The force exerted on a body by gravity.
114. work	The product of force and displacement.
115. wormhole	A hypothetical tunnel connecting two separate points in space-time.
116. x-ray	A form of electromagnetic radiation.
117. Young	Scientist known for his double-slit experiment.
118. Zeeman	Effect observed in the splitting of spectral lines in the presence of a magnetic field.
119. zero-point energy	The lowest possible energy that a quantum mechanical system may have.
120. z boson	A particle that mediates the weak nuclear force.