

THEORY

1. The first part of the theory discusses the basic principles of quantum mechanics, including the wave-particle duality and the uncertainty principle. It also covers the Schrödinger equation and the concept of wave functions.

2. The second part of the theory discusses the applications of quantum mechanics, such as the quantum tunneling effect and the quantum Hall effect. It also covers the quantum entanglement and the quantum teleportation.

3. The third part of the theory discusses the quantum computing and the quantum cryptography. It covers the quantum bits (qubits) and the quantum gates, as well as the quantum key distribution and the quantum secure communication.

Parameter	Value
Energy	10 eV
Wavelength	124 nm
Frequency	2.47 x 10 ¹⁵ Hz
Wave number	8.06 x 10 ⁶ m ⁻¹
Speed of light	3.00 x 10 ⁸ m/s
Planck constant	6.63 x 10 ⁻³⁴ J·s
Electron mass	9.11 x 10 ⁻³¹ kg
Proton mass	1.67 x 10 ⁻²⁷ kg
Neutron mass	1.67 x 10 ⁻²⁷ kg
Avogadro's number	6.02 x 10 ²³ mol ⁻¹
Boltzmann constant	1.38 x 10 ⁻²³ J/K
Gas constant	8.31 J/mol·K
Faraday constant	96485 C/mol
Elementary charge	1.60 x 10 ⁻¹⁹ C
Permittivity of free space	8.85 x 10 ⁻¹² C ² /V·m
Permeability of free space	4.00 x 10 ⁻⁷ T·m/A
Speed of sound	343 m/s
Acceleration due to gravity	9.81 m/s ²
Standard gravity	1 g
Standard atmosphere	101325 Pa
Standard atmosphere (torr)	760 torr
Standard atmosphere (mmHg)	760 mmHg
Standard atmosphere (inHg)	29.92 inHg
Standard atmosphere (psi)	14.7 psi
Standard atmosphere (atm)	1 atm
Standard atmosphere (bar)	1.01325 bar
Standard atmosphere (hPa)	1013.25 hPa
Standard atmosphere (kPa)	101.325 kPa
Standard atmosphere (mbar)	1013.25 mbar
Standard atmosphere (mmHg)	760 mmHg
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EXPERIMENT

