# Quiz

**What is the simplest form of a data processor in computers?**

* Logic gate
* Bit
* Transistor
* Module

**What is the smallest unit of information in a quantum computer?**

* Qudit
* Qubit
* Bit
* Byte

**Which of the following is a unique property of qubits?**

* Parallel processing
* Quantum tunneling
* Superposition
* Entanglement

**What is the advantage of quantum computers over classical computers for database searching?**

* No speedup
* Quadratic speedup
* Exponential speedup
* Linear speedup

**Which of the following is NOT a potential application of quantum computers?**

* Word processing
* Simulations
* IT security
* Database searching

**What is the process by which electrons may transfer themselves across a blocked passage in quantum physics?**

* Entanglement
* Relativity
* Superposition
* Quantum tunneling

**Which of the following is a component of a computer chip?**

* Bit
* Logic gate
* Module
* Transistor

**What is the reason why traditional computers stop making sense as transistors shrink to the size of a few atoms?**

* Quantum tunneling
* Relativity
* Superposition
* Entanglement

**What is the primary advantage of using qubits in quantum computers?**

* Reduced energy consumption
* Ability to perform parallel operations
* Increased processing speed
* Enhanced data storage capacity

**What is a quantum gate?**

* A theoretical concept in quantum mechanics
* A type of quantum algorithm
* A component of a quantum computer
* A device that manipulates qubits

**Process in which electrons may transfer themselves to the other side of a blocked passage**

* Transistor
* Quantum Tunneling
* Bit
* Superposition

**Transistor**

* Process in which electrons may transfer themselves to the other side of a blocked passage
* Close connection that makes each of the qubits react to a change in the other's state instantaneously
* Simplest form of a data processor in computers
* Smallest unit of information in normal computers

**Bit**

* Can be a qubit that uses horizontal or vertical polarization
* Smallest unit of information in normal computers
* Can be in any proportions of both states(0 and 1) at once
* Process in which electrons may transfer themselves to the other side of a blocked passage

**Qubits**

* Smallest unit of information in normal computers
* Smallest unit of information in quantum computers
* Can manipulate input superpositions, rotate probabilities, and produce another superposition as output
* Manipulate an input of superpositions

**Can be a qubit that uses horizontal or vertical polarization**

* Database Searching
* Photon
* Transistor
* Qubits

**Superposition**

* Process in which electrons may transfer themselves to the other side of a blocked passage
* Can be in any proportions of both states(0 and 1) at once
* Quantum computer algorithms need only the square root of the time a normal computer would take
* Can manipulate input superpositions, rotate probabilities, and produce another superposition as output

**Can manipulate input superpositions, rotate probabilities, and produce another superposition as output**

* Qubit Manipulation
* Photon
* Transistor
* Quantum Tunneling

**Manipulate an input of superpositions**

* Quantum Gates
* Database Searching
* Transistor
* Superposition

**Close connection that makes each of the qubits react to a change in the other's state instantaneously**

* Bit
* Quantum Tunneling
* Transistor
* Entanglement

**Quantum computer algorithms need only the square root of the time a normal computer would take**

* Photon
* Quantum Tunneling
* Database Searching
* Quantum Gates