



Quantum Supremacy - Google Researchers

Why in news?

It was reported that a draft research paper claimed that Google researchers had achieved a long-sought-after goal in physics called “quantum supremacy”.

What is the paper on?

- The draft paper had appeared on the NASA website and was then pulled down, but the Financial Times of the UK had retrieved a copy.
- It is said to have been written by scientists at Google and the Quantum Artificial Intelligence Lab collaboration that includes NASA researchers.
- The draft paper is believed to be an early version of a paper that has been submitted to a scientific journal.

What is a quantum computer?

- A quantum computer differs from a traditional computer in the way it stores information.
- A traditional computer stores information in the form of bits that can take only two values - zero or one.
- A quantum computer stores it in the form of quantum bits (qubits) that can take on various combinations of zero and one.

What is Quantum supremacy?

- Quantum supremacy refers to a quantum computer solving a problem that cannot be expected of a classical computer in a normal lifetime.
- This relates to the speed at which a quantum computer performs.
- The quantum processor referred in the paper took 200 seconds to perform a calculation.
- The world’s fastest supercomputer, Summit, would have taken 10,000 years to accomplish this.

Source: Indian Express



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