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22 – December 2022

APPOINTMENTS OF ECS AND CHIEF ELECTION COMMISSIONER (CEC)

Significance for Prelims: Not Much
Significance for Mains: New Method to appoint ECs and Chief Election Commissioner (CEC)

News: Recently, Supreme Court has been hearing cases about the appointment of election commissioners. Hearings in the Supreme Court on the appointment of Election Commissioners (ECs) made this a public discourse.

Evolution of Election Commission:

- India's elections have become almost a mechanistic and ritualistic exercise due to the evolution of India's constitutional and political structures over the years. The most precise reason for this is the setting up and functioning of the Election Commission of India (ECI).
- Article 324 of the Constitution created the Election Commission of India (ECI).
- Election Commissioners (ECs) ensure that the roots of democracy are kept appropriately watered and nourished.

Working of the Constitution: Final words of the President of the Constituent Assembly (CA) and the Chairman of the Drafting Committee for the Constitution during the Constitution-making process and when the Constitution was finally adopted.

- Dr. B.R. Ambedkar, while praising the adoption of the Constitution to the CA on November 25, 1949, said, "However good a Constitution may be, it is sure to turn out bad because those who are called to work it happen to be a bad lot. However bad a Constitution may be, it may turn out to be good if those called to work it happen to be a good lot. The working of a Constitution does not depend wholly upon the nature of the Constitution."
- Dr. Rajendra Prasad said, "Whatever the Constitution may or may not provide, the country's welfare will depend upon how the country is administered. That will depend upon the men who administer it… If the elected people are capable and men of character and integrity, they would be able to make the best even of a defective Constitution. The Constitution cannot help the country if they are lacking in these. After all, a Constitution, like a machine, is a lifeless thing. It acquires life because of the men who control it and operate it, and India needs today nothing more than a set of honest men who will have the interest of the country before them."
- In case ECs want to match the qualities stated by Dr Ambedkar and Dr Prasad. They need to go beyond the definition of Article 324 of the Constitution and the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991.

Major Weakness in the appointment systems of the ECs:

- **The bureaucratisation of the ECI** is visible in the elevation of ECs to the Chief Election Commissioner (CEC), which is a clear violation of the principle of primus inter pares and defect in the tenures of ECs and CEC.
- Monopolisation of the positions of ECs and CEC by the administrative services.

Way forward:

- Formation of a new committee that should propose the qualifications and requirements for persons to be appointed as ECs/CEC: The committee's proposals should be approved only if they are approved by a two-thirds majority of the members of Parliament present and voting.
- After approval of qualifications and requirements by Parliament, the committee should be entrusted with the task of searching for and selecting individuals proposed to be appointed as ECs/CEC.
- The committee should issue a call for nominations and applications from those qualified for or interested in the position of EC or CEC.
- The Parliament should review the committee's proposals: The committee's recommendations shall only be accepted by the legislature if they support two-thirds of the lawmakers present and voting. The suggestions should be given to the President for approval of the appointees after being approved by Parliament. Such individuals should hold their positions for six years or until they are 75, whichever comes first, after being appointed. People older than 69 years old shouldn't be appointed.
- People so appointed should only be subject to the same process of impeachment as justices of the Supreme Court.

Prelims:

Q. Article 324 of the Constitution is associated with
(a) Election Commission of India
(b) Supreme Court
(c) Comptroller and Auditor General of India(CAG)
(d) Attorney General of India

Source: The Hindu

Sharad

QUANTUM COMPUTING

Significance for Prelims: Quantum Supremacy; 'Post-quantum cryptography; Conventional computing.
Significance For Mains: Not Much

News: Google researchers have achieved 'quantum supremacy', in which a standard computer did a far better job than the world's most powerful supercomputer by harnessing the properties of sub-atomic particles. Google's quantum computer produced an answer to the task of finding a pattern in a seemingly random series of numbers. In 3 minutes and 20 seconds earlier it was estimated that the supercomputer at the Oak Ridge National Laboratory in Tennessee would take 10,000 years to complete the same task.

About Quantum supremacy:

- In simple terms, supremacy solves a computing task that a conventional computer would struggle to or never complete.
- Quantum supremacy is known as the achievement of the superior potential of quantum computing in practice effectively superseding existing forms of computing.

Difference between quantum computing and conventional computing:

- The basis of calculations in Conventional computers is 'bits' or ones and zeroes. These bits represent 'yes' and 'no', or 'on' and 'off'; a combination of bits can handle logical tasks.
- Quantum computing, using the property of sub-atomic particles, simultaneously exists in different states. Hence, a quantum bit or qubit can be both one and zero at the same time, and this is known as superposition.

- Quantum computers need to work with classical computers in the real world to use their respective strengths.

Reasons for the powers of Quantum Computers:
- 'Entangled' property of sub-atomic particles makes quantum computers so powerful. This property of sub-atomic particles influences each other's behaviour.
- When entanglement is combined with superposition, that leads to exponential computing power increases after adding each qubit.
- The Sycamore processor designed by Google had 54 qubits arranged in a two-dimensional grid. But only 53 could be made to work, which is enough to produce a successful result.
- Google has solved the problem associated with working quantum computing with high fidelity or accuracy.

Challenges of making quantum computing work:
- **Chances of errors in the calculations made by a quantum computer:** The qubits need to be cooled to just above absolute zero to reduce 'noise' – or vibration.

Critics of google's achievements in quantum computing:
- Critics say that Google is hyping its achievement in Quantum computing and creating the misleading impression that all conventional computers will become obsolete.
- Google's random problem can also be solved by adding disk storage to the IBM's Summit supercomputer, That could have solved that problem with greater accuracy in at most two-and-a-half days.
- There was scepticism that Google has only solved a very narrow task, and quantum computing is still needs to go a long way for practical use.

Potential uses for quantum computing:
- It is used in machine learning, materials science and chemistry.
- Cryptographers are already preparing quantum computers for cracking the codes.
- It can be used to secure online access to bank accounts. 'Post-quantum cryptography' is already here even before wide use of quantum computing.

Future Prospects of Quantum Computing:
- With its close rival IBM, Google is staking a claim to leadership in the 'quantum supremacy'.
- With growing applied research and startups, it may be possible to hook quantum computers to a cloud server for research work.
- New trade and technology cold war between the United States and China due to heavy Investment by China in fields such as artificial intelligence and backing quantum computing.

Prelims:
Q. Consider the following statements:
1. The basis of calculations in Conventional computers is 'bits' or ones and zeroes.
2. Quantum computing use the property of sub-atomic particles that simultaneously exist in different states.

Select the correct answer using the code given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Source: The Hindu

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