# Electronic Voting Machines (EVM) | Jammu & Kashmir | 25 Sep 2024

## Why in News?

Recently, elections are being conducted in Jammu and Kashmir, with Electronic Voting Machines (EVMs) playing a crucial role in the polling process.

## Key Points

- **About:** EVM is a device used to record votes electronically. They were first used in the **Paravur Assembly Constituency of Kerala in the year 1982.**
    - **Since 1998**, the Election Commission has increasingly used EVMs instead of ballot boxes.
    - **In 2003,** all state elections and by-elections were held using EVMs.
        - **Encouraged by this, in 2004,** the Commission took a historic decision to use only EVMs for the Lok Sabha elections.
- **Development:** It has been devised and designed by the **Technical Experts Committee (TEC)** of the Election Commission in collaboration with two Public Sector undertakings: **Bharat Electronics Ltd, Bangalore (under Ministry of Defence ) and Electronic Corporation of India Ltd, Hyderabad (under Department of Atomic Energy).**
- **Functionality:** It has two parts, a Control Unit and a Balloting Unit connected by a cable.
    - The Control Unit stays with the polling officer, while the Balloting Unit is in the voting booth.
    - The voter has to simply press the blue button on the **Ballot Unit** against the candidate and symbol of his choice and the vote is recorded.
- **Key Features:**
    - An EVM being used by **ECI can record a maximum of 2,000 votes.**
    - They do not require electricity. They run on an ordinary battery assembled by Bharat Electronics Limited/Electronics Corporation of India Limited.
    - The microchip used in EVMs is a **one-time programmable/masked chip,** which can neither be read nor overwritten.
        - Furthermore, the EVMs are stand-alone machines and there is no operating system used in these machines.
- **Benefits:**
    - Accuracy: EVMs eliminate the occurrence of 'Invalid Votes' seen frequently with paper ballots. ensuring a more accurate reflection of voter choice and reducing complaints and legal disputes.
    - **Efficiency:** EVMs streamline the voting process, making it faster and more efficient. They eliminate the need for manual counting, reducing the time required to declare election results.
    - **Transparency:** EVMs enhance transparency in the electoral process by providing a clear and verifiable record of votes cast. **With features like VVPAT,** voters can verify that their votes are recorded accurately.
    - **Cost-effectiveness**: EVMs offer cost savings in terms of paper, printing, transportation, and storage, as they eliminate the need for millions of printed ballot papers for each election cycle.

## VVPAT

- **About**: Voter Verifiable Paper Audit Trail (VVPAT) is an independent system attached with the EVM

that allow the voters to verify that their votes are cast as intended.
  - It was introduced in the bye-election of the **Noksen Assembly Constituency of Nagaland in 2013.**
  - In the 2019 Lok Sabha elections, VVPATs were used in all the constituencies.
- **Functionality:** When a vote is cast, a slip is printed containing the serial number, name and symbol of the candidate and remains exposed through a transparent window for 7 seconds.
  - Thereafter, the printed slip automatically gets cut and falls in the sealed drop box of the VVPAT.
  - The machines can be accessed by polling officers only.
- **Related Supreme Court Ruling: In a 2013 Subramanian Swamy V/S ECI case,** the Supreme Court emphasised the necessity of implementing VVPAT in elections conducted through EVMs.
  - Presently, the **M3 Model of ECI-EVM and VVPAT are used**.