# Electronic Voting Machines (EVM) [UPSC GS II]

Electronic Voting Machines (EVM) introduced in India in 1982 allow the citizens to vote electronically and ease the job of the Election Commission of India in counting the votes. Aspirants preparing for the IAS Exam should be aware of this topic.

The Election Commission of India and issues related to Voting are very important when it comes to UPSC Exams or any other Government Exams. These topics of the UPSC Syllabus come under the Indian Polity and Governance part of the General Studies Paper-2 section.

# What is an EVM - Electronic Voting Machine?



- EVMs are electronic voting machines which enable the voter with a button for each choice of candidate. It is attached by a cable to an electronic ballot box.
- It comprises two units – control unit and balloting unit. They are connected by a 5-metre cable.
- The EVM runs on a 6-volt single alkaline battery fixed in the control unit.
- It can even be used in areas that have no electricity.
- The control unit is with the Election Commission selected polling officer.
- The Balloting Unit is in the voting section into which the voter enters to cast their vote in secret by pressing the button against the name and sign of the candidate of their choice.

Read in detail about the Election Commission of India.

Pros & Cons of EVM

| Pros | Cons |
|---|---|
| **Environmentally friendly**<br><br>- Less use of paper<br>- No printing<br>- Easier to store and transport<br>- Higher shelf life | Security<br><br>- Not easily, but can be hacked and tampered with.<br>- The time gap between the voting and the counting of votes is a risk to possible tampering, as the ballots are physically stored after votes |
| **Efficient**<br><br>- Faster counting of votes<br>- No bogus votes<br>- No invalid votes<br>- Easy to install and use | Technical Issues<br><br>- Malfunction in the software can give out errors.<br>- Hardware can cause issues too if the EVM is not handled with care. |

| | |
|---|---|
| - Can be used by the State Legislative Assembly as well as Parliament. | |
| **Security** <br><br> &bull; Not easily tampered | Authenticity <br><br> &bull; Citizens/voters can't verify their votes. |

# Voter Verified Paper Audit Trail (VVPAT)

- VVPAT is an independent verification printer machine and is attached to electronic voting machines.
- It allows voters to verify if their vote has gone to the intended candidate.
- When a voter presses a button in the EVM, a paper slip is printed through the VVPAT. The slip contains the poll symbol and name of the candidate.
- It allows the voter to verify his/her choice.
- After being visible to the voter from a glass case in the VVPAT for seven seconds, the ballot slip will be cut and dropped into the dropbox in the VVPAT machine and a beep will be heard.
- VVPAT machines can be accessed by polling officers only.

## UPSC Questions related to Fundamental Rights

**What is the use of electronic voting machines?**

Electronic voting machines are an electronic way to vote and count votes in an election.

**Who manufactures electronic voting machines?**

EVMs in India are manufactured by Bharat Electronics Ltd (Bengaluru) and Electronic Corporation of India Ltd (Hyderabad).

**What will happen if the EVM in a particular polling station goes out of order?**

In such a scenario, the EVM will be replaced with a new one. The votes counted till then is safe in the memory of the control unit.

**When was the EVM first introduced in elections?**

EVMs were used for the first time in India in 1982 in the by-election to the North Paravur Assembly constituency in Kerala.

**In which countries is EVM banned?**

Some countries that have discontinued using the EVMs are the Netherlands, Kazakhstan and Ireland.

**How can EVMs be used in areas where there is no electricity?**

EVMs do not need electricity, they run on batteries.