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Automated Multi-Modal Biometric Identification System

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Maharashtra government has stated that after the implementation of Automated Multi-modal Biometric Identification System (AMBIS), rate of conviction is expected to rise substantially in the State.

- AMBIS is an advanced crime detection system, for detection of crime based on the available fingerprint, palmprint and iris scan data of criminals on record as well as accidental finger/ palm-prints collected from crime scenes.
- AMBIS uses mobile live scanners and a police patrol team can ascertain on the spot if a suspect has criminal antecedents.
- Besides detecting crime through fingerprints at the crime scene, the system with the help of retinal scan, writers pad, palm and even bare sole scans can help trace criminals with 100% accuracy, and that too within a 0.46 milliseconds.
- In any crime, fingerprints as evidence is accorded very high value, and if available, it is accepted in a court of law.

Fingerprint Identification

- Ever since the British introduced fingerprint identification in Kolkata in 1857, the Fingerprint Bureau has been under the jurisdiction of the State Criminal Investigation Department (CID).
- After the system crashed in 2012, the CID has been manually scanning and matching fingerprint data with available crime scene data, employing eight to 10 different characteristics. The task is huge as the CID has to go through 6.5 lakh fingerprints data stored with it.

Significance

- The system can be **useful in identifying bodies**, especially in cases where the body is mutilated, does not have an arm or a hand is lost. In such cases, the bare sole scan can help identify the body.

- The system provides for the **retinal scans**, which will make it very difficult for criminals to escape the law. The retina of every individual is unique, and the blood vessels inside the retina too have unique arrangement.
- Another feature of the system is **facial recognition of suspects in cases of mob violence and mob lynching**, with the help of photographs and CCTV footage.
- The system will prove handy in cases of **terrorist attacks** in crowded places like railway stations, giving 50%-60% accuracy if 40% of the information available is accurate.
- The system can ensure that **there will be no data loss**, and has back-up facility at a very high level.
- **AMBIS can be interfaced with any other operating system**, whereby data can be accessed anywhere, anytime.
- Fingerprint data can be shared by the State government with the National Crime Records Bureau, other State governments, investigation agencies, courts, crime experts and even with Interpol and foreign investigation agencies.
- Presently, AMBIS is being used by Interpol and other European agencies.