

1. How can artificial intelligence and machine learning techniques help in improving e-governance? Illustrate with the help of suitable examples.

Demand of the question:

It expects students to explain with relevant examples about how the application of artificial intelligence and machine learning techniques help in improving e-governance.

Introduction:

Artificial Intelligence (AI) and Machine Learning (ML) are the two emerging technologies. AI and ML have great potential to do things that humans will never be able to do themselves. Hence, AI and ML together can bring a positive impact on business, society, culture and especially in e-governance.

Body:

Artificial Intelligence and Machine learning are a rapidly evolving technologies that harnesses the ability of machines to learn and perform cognitive functions, similar to that of the human brain. It incorporates, among other things, learning, problem-solving, speech recognition, and planning.

Use of Artificial intelligence and Machine learning to improve e-governance:

- Many local municipalities or government departments can invest in and use AI in call centres or customer service. The vast majority of calls coming in are fairly basic, repeat questions or routine reports.
- It will reduce the burden of work on government officials and will also help to use that human capital for more productive work.
- By making use of intelligent chat bots, this process can be automated. This automation will improve service and user experience, as it will be faster and more accurate. The chat bots can answer questions, provide information, receive, and report information, and guide citizens with applications.
- For example, the United States Army uses an interactive virtual assistant to check qualifications, answer questions, and refer potential recruits to human recruiters. It does the work of 55 recruiters, and at a 94% accuracy rate that is improving as the machine learns
- In the power department and meteorological department, self-learning weather forecasting technology uses machine learning, sensor information, cloud-motion physics derived from sky cameras, and satellite observations to improve rain forecasting accuracy by 30%.
- It will in turn help to predict the amount of rainfall the region is going to receive and also helpful to declare guidelines regarding the crop sowing cycles, fertilizers etc.
- Law enforcement, public safety, and criminal justice can all benefit from the power of AI. Facial and image recognition software can quickly and more accurately analyze thousands of hours of video footage in crime or terrorist-related issues, narrowing the search down and showing where people should focus their attention.

- **Education:** In the education sector, AI and ML have a variety of use cases and applications. By analysing a student's past data, AI and ML can help the student in making decisions when choosing courses and electives at universities. AI chat bots can be used to interact with students for admission queries.
- **Intelligence, Surveillance, and Advanced Robotics:** AI can be used to monitor and control unmanned autonomous vehicles for gathering intelligence and advanced surveillance purposes. Machine learning algorithms can help in evaluating border infiltration patterns and predict the possibility of infiltrations happening at certain times.
- **Traffic Control:** Traffic lights in most countries are set to a pre-set value to control the traffic. This value doesn't vary with the changing traffic conditions. AI can help in synchronizing traffic data and control the traffic based on the situation in real-time. It ensures a smooth flow of traffic without causing any inconvenience to commuters. e.g. A 3-D Smart Traffic Signal system is developed by engineering students in Chandigarh.

The potential benefits of AI and ML are patently clear in the public sector, but still there are some impediments which needs to be addressed:

- **Learned Prejudice:** the mathematical structures that AI-enabled systems depend upon can absorb and reproduce human prejudices. If machine learning systems are trained to regard different categories of people differently, they may become another engine of social inequality. e.g. Rich poor gap, Cast discrimination.
- **Cultural Sensitivity:** According to World Economic Forum research, the way workers and civilians respond to the inclusion of AI systems in their lives can depend on cultural context. The populations of China and England, for instance, are much more open to AI-enabled surveillance technologies than the populations of some underdeveloped countries.
- **AI Myths & Expectation:** There's a quite discrepancy between the actual potential of the AI system and the expectations of this generation. Artificial Intelligence, with its cognitive capabilities, has potential to replace human's jobs.

Most government departments around the world are understaffed, under skilled, and face massive backlogs in many areas of their administration. Resources are scarce. As a result, in many cases, service delivery is slow and poor.

Conclusion:

Artificial intelligence and machine learning can take care of the time consuming, labour intensive administration, speed up internal processes, develop massive cost savings, increase productivity, improve the speed and accuracy of decision-making, identify potential problems before they become major issues, and allow for much better allocation of resources. Hence, It can make government more responsive, more efficient, and improve the lives of their citizens.

2. Critically assess the efficacy of the Right to Information (RTI) as a tool of accountability and transparency in governance.

Demand of the question:

It expects students come to a decision based on the overall analysis of the pros and cons backed by evidence about the efficacy of Right to Information as a tool of accountability and transparency in governance.

Introduction:

The path-breaking Right to Information Act came into effect in 2005 with the objective to ensure accountability and transparency in governance. It has been heralded as the most significant reform in public administration in India since Independence.

Body:

Transparency and accountability through RTI:

- Empowerment of people: RTI Act has lent voice to the aspirations of ordinary citizens in issues of governance. It gave the common people a defining power to shape the government schemes and policies. It empowered the people to question, audit, review, examine, and assess government acts.
- Checking corruption: RTI is the most effective instrument to check corruption where the citizen has the right to take the initiative to seek information from the state and thereby promotes openness, transparency and accountability in administration by making the government more open to public scrutiny.
- For instance, It played a big role in exposing the Adarsh scam, irregularity in MGNREGA and other schemes.
- Awareness: RTI Act empowered the people to seek definite and direct answer from the officials of their works or lack of it. RTI applications have annually increased by 8 to 10 times.
- Around 13.70 lakh RTI applications were received in 2018-19 by the registered Central Public Authorities (PAs) which shows how people have become aware of this powerful act.
- Increasing ambit of RTI: SC judgement in 2019 opened office of CJI to RTI. An effort is underway to bring political parties under RTI also but it is vehemently opposed by the political parties.
- Suo moto disclosure of information has become a trend in many ministries and government offices.
- Every year, an estimated 5-8 million RTI queries are filed. Around 45 RTI activists have been killed so far, not counting the many attacked.

Hence, it can be deciphered that RTI has almost successfully achieved not all but many of the objectives of it. In spite of these efforts and reforms some lacunas still remain where RTI has failed to ensure transparency and accountability, which needs to be addressed:

- High pendency: The Information Commissions were envisioned as the watchdogs in the implementation of the RTI act. 15 years later, the

commissions seem to be going the way of the Judiciary in terms of pendency. CIC currently has more than 30,000 pending cases.

- Delay in appointments of Information Commissioners and opacity: Despite the SC direction, four vacancies continue to remain unfilled in the CIC since January 1, 2019, in addition to thousands of vacancy in State Information offices. There is opacity in appointment procedure of CIC and other Information Commissioners.
- RTI Amendment Bill 2019: which seeks to amend Sections 13, 16, and 27 of the RTI Act. The amendment threatens RTI through provisions such as: CIC's fixed term of 5 years has been changed to "term as may be prescribed by the Central Government"
- The salaries, allowances and other terms of service of the Chief Information Commissioner and the Information Commissioners "shall be such as may be prescribed by the Central Government" which were earlier equivalent to Chief Election Commissioner.

Due to these emerged challenges over the time RTI Act seems to have lost its way of transparency and accountability. Following Steps can be taken to ensure transparency and accountability through RTI:

- Transparency in the process and quick appointment of Information Commissioners.
- Reducing the pendency in RTI disposal.
- Simplification of processes for filing of RTI Requests and Appeals to central Government Authorities.
- Establishing an institutional mechanism for collaborative working with CSOs and Media and included consultation meetings of the National RTI Committee, RTI Fellowships, etc.

Conclusion:

Since its inception in 2005, one can conclude that RTI has made its impact felt in the functioning of Government bodies and the larger governance discourse, as the staff has become active, conscious, regular, punctual, accountable and responsible. However, some structural challenges and new emerged challenges posed a question on the transparency and accountability through RTI. Hence, independent institution of RTI needs to be preserved in its original form to realise true meaning of democracy.

3. What are the most serious impediments for the success of e-governance initiatives in India? Examine.

Demand of the question:

It expects students to present clear facts and data regarding the serious impediments for the success of e-governance initiatives in India.

Introduction:

India being a developing country needs to fill the socio-economic objectives with effective governance of the government. In the context of Indian economy, every sector is being impacted by e-governance.

Body:

Govt. of India has launched the initiatives of e-governance; providing all services electronically as much as possible. Govt. of India launched several projects in support of e-governance, like e-seva, smart govt, digital India, e-kranthi and etc. Each of these projects seems to be benefitting the citizens to a greater extent. In spite of this process, yet, there are some impediments regarding success of e-governance.

Serious impediments for the success of e-governance initiatives in India:

- **Trust:** It is the emerging challenges of e-governance. Trust can be defined regarding users of new software and trust of the govt. former aspect implies that users of any type of software or technology must be confident, comfortable and trusting of it
- Another very important aspect related to trust of govt. Nowadays, citizens using e-governance services, trusting the innovations of e-governance to some extent. Furthermore, there might be some fraudulent activities done by any other entity for the sake of finance, valuable info and even about personal information, etc. Besides, in govt. offices, dept. valuable info sometimes left out or missed; it definitely erodes trust about e-governance among all classes citizens of the economy
- **Digital divide:** Even in the era of science and technology, there is still huge gap exists between users and nonusers of e-govt. services. In fact, in India, majority of the masses, who living below poverty line and they deprived of govt. services. In contrast, some portion of people are immensely using the e-services of government . However, this gap needs to be made narrow, then only ,the benefits of e-governance would be utilized equally.
- **Tampering of E-Governance system:** As soon as the system is compromised and privileges are raised, the classified information of the E-Governance mechanism becomes very much susceptible to illegal adjustments.
- **Disclosure of E-Governance Information:** In case of the compromised E-Governance system, the undesirable information disclosure can take place very easily.
- **Denial of Service:** In this technique, attacker can perform Denial of Service (DoS) attack by flooding the E-Governance server with request to consume all of its resources so as to crash down the mechanism

- Funding is the foremost issue in e-Governance initiatives. The projects that are part of the e-governance initiatives need to be funded either through the Government sector or through the private sector.
- The delivery of Government services through the electronic media including EDI, Internet and other IT based technologies would necessitate procedural and legal changes in the decision and delivery making processes.
- It demands fundamental changes in Government decision management. The employees need to be delegated more authority. De- layering of the decision-making levels leads to re-engineering and appropriate sizing of the decision-making machinery.
- Use of local language: The access of information must be permitted in the language most comfortable to the public user, generally the local language. There already exist technologies such as GIST and language software by which transliteration from English into other languages can be made.

Following steps are needed to be taken up to tackle these challenges:

- National Citizen Database which is the primary unit of data for all governance vertical and horizontal applications across the state and central governments.
- Based on National Citizen Database, an e-Governance framework across the nation with enough bandwidth to service a population of one billion.
- Connectivity framework for making the services to reach rural areas of the country or development of alternative means of services such as e-governance kiosks in regional languages.
- A secure delivery framework by means of virtual private network connecting across the state and central government departments.

When government started launching many initiatives for e-governance; it has become one of the emerging economies due to its potentiality of Information and Communication Technology. Till now, govt. has implemented various initiatives with different projects (Digital India, e-kranthi, etc).

However, digital divide between urban and rural, poverty, illiteracy, security and cost of implementation, etc. each of these issues and challenges are posing serious concern to the success of e-governance.

Conclusion:

Hence, if these challenges are addressed carefully then it will not just only help to achieve better success for e-governance but also will ensure improvement in governance processes and outcomes with a view to improve the delivery of public services to citizens. The resultant benefits are less corruption, increased transparency, greater convenience, revenue growth, and cost reductions.