



## Mains Practice Question

**Q.** Discuss how Artificial Intelligence can be used to meet India's socio-economic needs. (150 words)

08 Jan, 2020 GS Paper 3 Science & Technology

### Approach

- Briefly introduce the Artificial Intelligence and its applications.
- Discuss how Artificial Intelligence can be used to meet India's socio-economic needs.
- Give conclusion.

### Introduction

- Artificial Intelligence (AI) refers to the ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem-solving and decision making.
- India, being the fastest growing economy with the second largest population in the world, has a significant stake in the AI revolution. Experts believe that Artificial intelligence could add at least a trillion dollars to our economy by 2035.

### Body

- AI can help achieve the trillion dollars target by augmenting labour productivity and innovation, driving growth through intelligent automation, human-machine collaboration and innovation diffusion.
- Some of these are already in play in the form of **smart factories** where humans and machines work side by side to improve outcomes.
  - In the insurance sector, machines are doing repetitive tasks, allowing humans to focus on more complex, judgement-based processing and customer service.
  - New opportunities are also created through innovation spillovers. For instance, Google Maps is helping drive the growth of Uber and Ola, revolutionising personal transport and creating employment for a large number of people.
- AI, used in combination with robotics, Big Data analytics, Internet of Things (IoT) and genomics, could also improve the lives of our farmers.
  - Solutions for traditional challenges such as the unpredictability of weather or soil conditions, or the increasing costs of farm labour are being used extensively in several parts of the world, and precision farming, enabled by these technologies, is globally proven to increase crop yields, reduce farmers' costs and boost profits.

**NITI Aayog has decided to focus on five sectors** that are envisioned to benefit the most from AI in solving societal needs:

- **Healthcare:** increased access and affordability of quality healthcare,
- **Agriculture:** enhanced farmers' income, increased farm productivity and reduction of wastage,
- **Education:** improved access and quality of education,
- **Smart Cities and Infrastructure:** efficient and connectivity for the burgeoning urban population,

and

- **Smart Mobility and Transportation:** smarter and safer modes of transportation and better traffic and congestion problems.

To truly reap the benefits of deploying AI at scale, the following **barriers need to be addressed** in order to achieve the goals of **AIforAll**:

- Lack of broad-based expertise in research and application of AI,
- Absence of enabling data ecosystems - access to intelligent data,
- High resource cost and low awareness for adoption of AI,
- Privacy and security, including a lack of formal regulations around anonymisation of data, and
- Absence of a collaborative approach to the adoption and application of AI.

## Conclusion

- It is essential that we equip our people with the education, training and support they need to take on the many jobs that will be created.
- We also need to make AI responsible. Government and businesses must work together to develop a code of ethics - tangible standards and best practices to develop and use intelligent machines.

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