



## Mains Practice Question

**Q.** Artificial Intelligence has the potential to provide large incremental value to a wide range of sectors. Comment. (150 words)

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### Approach

- Explain what is Artificial Intelligence (AI)
- Discuss how AI can augment the growth in various sectors like healthcare, agriculture, retail etc.
- Conclude by stressing on the importance of AI

### Introduction

**Artificial Intelligence (AI)** refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving. Artificial Intelligence (AI) has the potential to have a transformative impact on national economic growth.

### Body

**Artificial Intelligence can be utilized in the following ways**

- **Healthcare:** Application of AI in healthcare can help address issues of high barriers to access to healthcare facilities, particularly in rural areas that suffer from poor connectivity and limited supply of healthcare professionals. (e.g. Driven diagnostics, personalized treatment, early identification of potential pandemics, and imaging diagnostics)
- **Agriculture:** AI holds the promise of driving a food revolution and meeting the increased demand for food. E.g. Increase in crop yield through real time advisory, advanced detection of pest attacks, and prediction of crop prices to inform sowing practices.
- **Smart Mobility, including Transports and Logistics:** Potential use cases in this domain include autonomous fleets for ride sharing, semi-autonomous features such as driver assist, and predictive engine monitoring and maintenance.
- **Retail:** AI solutions have emerged as a game changer in retail sector such as improving user experience by providing personalized suggestions; preference-based browsing and image-based product search, customer demand anticipation, improved inventory management, and efficient delivery management.
- **Energy:** Potential use in the energy sector includes energy system modeling and forecasting to decrease unpredictability and increase efficiency in power balancing and usage.
- **Smart Cities:** Integration of AI in newly developed smart cities and infrastructure could also help meet the demands of a rapidly urbanizing population and providing them with enhanced quality of life.
- **Education and Skilling:** AI can potentially solve the quality and access issues observed in the Indian education sector. E.g. **personalized learning, automating and expediting administrative tasks**, and predicting the need for student intervention to reduce dropouts or recommend vocational training.

## Conclusion

The AI strategy is aimed at primarily guiding an inevitable wave of change for quicker and better impact. The AI ecosystem is rapidly evolving and taking societies into uncharted territory. Adoption of AI across the value chain viz. startups, private sector, PSUs and government entities, will provide large incremental value to a wide sector of economy by creating a virtuous cycle of supply and demand.

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