Indian Economy · GS - III

Examine the economic opportunities and financial sustainability challenges associated with large-scale investments in artificial intelligence infrastructure.

EXAM YEAR	PAPER	SUBJECT
DAILY PRACTICE 11/11/2026	GS - III	Indian Economy

MARKS	WORD LIMIT
10	~150 words

Answer Hint

Capital-intensive technology, economies of scale, depreciation, operating losses, productivity gains, enterprise demand, infrastructure financing, long-term profitability.

Model Answer

Introduction

Artificial intelligence is emerging as a major driver of economic transformation. However, developing advanced AI systems requires substantial investment in computing infrastructure, data centres, specialised chips and research.

Economic Opportunities

AI infrastructure can improve productivity across manufacturing, healthcare, education, agriculture and financial services. It can generate high-skilled employment, encourage innovation and enhance the global competitiveness of technology enterprises. Economies of scale may gradually reduce computing costs as infrastructure utilisation increases.

Financial Sustainability Challenges

Large upfront investments create significant capital expenditure and recurring operational costs, including electricity, maintenance and computing resources. Depreciation and rapid technological obsolescence can further affect profitability. Consequently, companies may experience rising revenues alongside substantial operating losses.

Way Forward

Businesses must balance infrastructure expansion with realistic revenue projections, efficient resource utilisation and technological innovation. Governments should promote domestic semiconductor manufacturing, renewable-powered data centres, research and fair competition while addressing energy and environmental concerns.

Conclusion

AI infrastructure is a strategic economic investment, but its long-term success depends on converting technological capabilities into sustainable productivity gains and commercially viable services.

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