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Q1. What is SDG 7? Why is it important in India's context?

Ans SDG 7 aims ensure access to affordable reliable sustainable and modern energy for all by 2030. it includes targets such as increasing the share of renewable energy, improving energy efficiency, and ensuring universal energy access.

Importance in India

- Around 15% of rural India still struggles with reliable electricity.
- India is one of the world's largest energy consumers and importers.

- Sustainable energy helps reduce pollution, fight climate change, and support rural development

Q2. What are sustainable and non-sustainable sources of energy?

Ans Sustainable (Renewable) Energy Sources.

- Solar energy
- Wind energy
- Hydropower
- Biomass
- Geothermal

Non-Sustainable (Non-Renewable)

- Coal
- Natural Gas
- Oil
- Nuclear energy.

Q3. Case study: Sustainable Energy in Manipur.

Ans Manipur

- Hilly terrain and forest cover; faces electricity shortages
- Hydropower is the main source of renewable energy.
- Solar power is being promoted in villages for villages for lighting and irrigation.
- Projects like off-grid solar rooftops are supported by the state government and MNRE.

Q4. Case Study: Sustainable Energy in Haryana.

Ans Haryana.

- One of India's most industrialized States.

- Has adopted large-scale solar rooftop programs in schools, colleges, and government buildings.
- Promotes biomass energy from agricultural waste like paddy stubble.
- Energy Efficiency programs are active in urban areas through LED street lighting.

G.S. Comparison Table: Manipur vs Haryana.

Ans	Factor	Manipur	Haryana
	Geography	Hilly, rural	Plains, industrial
	Renewable focus	Hydropower, Solar	Solar, biomass
	Government programs	Solar rooftop, Solar lanterns	Solar cities, rooftop
	Challenges	Infrastructure, connectivity	Air pollution, crop burning
	Energy Access level	Low in rural areas	High but rising demand

Q6. What challenges do both states face in clean energy adoption?

Ans. Manipur.

- Difficult terrain
- Limited grid connectivity
- High cost of renewable setup.

• Haryana

- Grid learning leads to high pollution
- Land availability for solar farms.
- Resistance to switching from fossil fuels.

Q7. What solutions or innovations are being used?

Ans. Solar microgrids in villages (Manipur)

- Smart meters for efficient consumption.

- Government subsidies on solar panel installation.
- Bio-energy from agricultural waste (Haryana).
- Public-private partnerships to scale energy projects.

Q8. Role of Youth and Students in promoting SDG 7.

- Ans.
- Participating in energy conservation programs.
 - Using solar lamp and appliances.
 - Conducting awareness drives and energy audits.
 - Innovating green solutions (like solar cookers, smart bulbs).

- Supporting green campus movements.

Q 9. Conclusion: Can India achieve SDG 7 by 2030?

Ans Yes, India can achieve SDG 7 by:

- Scaling up solar and wind power.
- Improving energy access in rural areas
- Reducing reliance on coal.
- Promoting awareness and behaviour.
- Engaging youth, industries and government