

Generation:

- a. What are the major sources of electricity generation in India?
- b. Name the largest thermal power plant in India.
- c. Discuss the potential of renewable energy sources in India's power generation.
- d. What are the challenges faced by the hydroelectric power sector in India?
- e. Explain the concept of distributed generation and its significance in India's energy landscape.

Transmission:

- a. Describe the role and functions of the Power Grid Corporation of India Limited (POWERGRID) in the transmission sector.
- b. What is the importance of high-voltage direct current (HVDC) transmission in India?
- c. Discuss the challenges faced by the transmission sector in integrating renewable energy into the grid.
- d. Explain the concept of grid stability and the measures taken to maintain it in the transmission system.
- e. What is the significance of the National Grid in India's electricity transmission infrastructure?

Distribution:

- a. Describe the structure and organization of the distribution sector in India.
- b. Discuss the initiatives taken by the government to improve the efficiency of power distribution in India.
- c. Explain the concept of smart grids and their potential benefits in the distribution sector.
- d. What are the challenges faced by the distribution companies (DISCOMs) in India?
- e. Discuss the importance of consumer-centric approaches in improving the distribution sector's performance.

Policies and Regulations:

- a. Explain the Electricity Act, 2003, and its impact on the power sector in India.

- b. Discuss the initiatives taken by the government to promote renewable energy generation and its integration into the grid.
- c. What is the role of the Central Electricity Regulatory Commission (CERC) in regulating the power sector?
- d. Describe the concept of open access in the power sector and its significance for consumers and industries.
- e. Discuss the government's efforts to ensure electricity access to all through initiatives like the Saubhagya Scheme.

Future Outlook:

- a. Discuss the emerging trends in the power sector in India, such as energy storage, electric vehicles, and smart meters.
- b. What are the challenges and opportunities in achieving the government's target of 175 GW of renewable energy capacity by 2022?
- c. Explain the concept of microgrids and their potential role in ensuring reliable and sustainable electricity supply.
- d. Discuss the impact of digitalization and automation on the generation, transmission, and distribution sectors in India.
- e. What are the potential strategies and measures to improve the overall efficiency and sustainability of the power sector in India?

Feel free to use these questions for assessments, quizzes, or discussions related to the generation, transmission, and distribution scenario in India.