

RENEWABLE ENERGY SYSTEMS & DSM

1. What distinguishes stand-alone PV systems from grid-connected PV systems in terms of functionality and applications?
2. Explain the primary components of a wind energy conversion system and their individual roles in energy generation?
3. How is biomass categorized based on its origin and composition and how does this classification influence its energy potential?
4. What distinguishes anaerobic digestion from ethanol fermentation as biomass conversion processes?
5. What are the primary methods used to measure solar radiation availability?
6. What role does the Tip Speed Ratio (TSR) play in optimizing the efficiency of wind turbines, especially concerning different wind speeds?
7. What are the fundamental procedures followed during an energy audit, from data collection to analysis?
8. What is Demand-Side Management (DSM) and why is it relevant in the Indian energy landscape?
9. How does the Electricity Act in India influence the regulatory framework for the energy sector?
10. What are the advantages of adopting an integrated resource planning approach in the energy sector, especially in a country like India with varied energy demands?
11. What are the different classifications of Demand Response options available and how do they vary in their approach to managing energy consumption?
12. How does an Energy Management System facilitate the implementation of Demand Response strategies?
13. What components make up the architecture for implementing Demand Response strategies?
14. What role does the communication infrastructure play in enabling effective Demand Response mechanisms?
15. What is the significance of load research in the energy sector, especially concerning the understanding of fluctuations in electricity demand and supply?
16. Why are energy audits essential, and what are the different types of audits conducted in the context of energy management?
17. What methods or models are typically used in load forecasting and how do these aid in determining sector-wise and end-use load patterns?