

CHAPTERWISE QUESTION BANK

Unit 1: Introduction to Smart Grid

1. Define smart grid concept and explain its necessity.
2. Explain functions of smart grid components.
3. Explain how the automatic meter reading can make the system smarter.
4. Explain outage management system.
5. Explain the vehicles-to-grid technology.
6. Describe substation and feeder automation.
7. Explain how the reliability of smart grid can be enhanced by integrating intelligent electronic devices (IED) into it.
8. Explain IED application for monitoring and protection.
9. Explain smart metering and advantages of it.
10. Compare conventional metering and smart metering.
11. Explain about smart storage batteries.
12. Explain super conducting magnetic energy storage.
13. Explain pumped hydro and compressed air energy storage.

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Unit 2: Smart Grid Architecture

1. Draw & Explain Smart Grid Architecture.
2. Draw & Explain Smart Grid Components
3. Explain in details Distribution Automation in Details
4. Explain in details Transmission Automation in Details
5. Explain benefits of Renewable energy Integration benefits
6. Explain Renewable energy Integration using AI (Artificial intelligence)
7. Explain Renewable energy Integration using Computational Techniques
8. Explain applications of AI (Artificial intelligence) in power system
9. Compare AI Vs CI

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Unit 3: Distribution Generation Technology

1. What is Microgrid ? List its characteristics.
2. Compare Microgrid with conventional utility grid.
3. With neat sketch, explain typical micro grid configuration.
4. Explain the role of central controller in stand alone and grid connected mode of operation of microgrids.
5. Draw and explain the typical configuration of an AC Microgrid.
6. Draw and explain the Types of a DC Microgrid.