

Unit-I

1. List the different electro chemical storage system
2. How the Energy storage system are classified
3. List the different type of electrical energy storage system?
4. What are the standards should be maintain for ESS
5. Why the electrical energy storage is required and describe the different ESS techniques
6. Explain the following chemical energy storage system
 - a) Hydrogen
 - b) Synthetic Natural gas
7. Define the following mechanical storage system
 - a) Compressed air energy storage
 - b) Pumped hydro storage
8. Define Super Conducting magnetic energy storage system with advantages and disadvantages.
9. Compare the different ESS technologies in technical sense and highlight the superior technology
10. Write Application of different type of ESS

Answers:

Unit-III

1. Explain the Thermal Energy storage-sensible heat energy storage system
2. Thermal Energy storage latent heat storage system
3. Thermal Energy storage Phase Change Materials application and characteristics
4. Discuss the Energy and exergy analysis of thermal energy storage with solar plant example
5. How Electrical Energy storage stores in super conducting magnetic capacitors
6. Explain the Magnetic Energy storage Superconducting systems
7. Describe Mechanical energy storage
 - a) Pumped hydro
 - b) Flywheels and
 - c) pressurized air energy storage,
8. Discuss Chemical storage system
 - a) Hydrogen production
 - b) Synthetic Natural Gas as given much importance to storage techniques

9. Emerge the Principle of direct energy conversion using fuel cells,
10. Why thermodynamics of fuel cells usage more in storage system
11. Classifies of fuel cells,
12. Expalin Fuel cell performance with briefly
13. Electrochemical Energy Storage
 - a) Batteries as,
 - b) Primary,
 - c) Secondary and
 - d) Flow batteries

Unit-III

1. Why the Electrical energy storage is required and describe the different ESS storage technologies.
3. What are the Emerging needs for EES
2. Explain the roles of electrical energy storage technologies in viewpoint of utility
4. Describe about more renewable energy-less fossil fuel utilities
5. Emmunarate the consequence happening in power grid due to day by day congestion
6. Explain the roles of electrical energy storage technologies in viewpoint of consumer
7. Explain the roles of electrical energy storage technologies in viewpoint of generate RES.

Unit-IV

1. Describe the Electrical storage systems
2. Explain the Double-layer capacitors (DLC) as ESS
3. Discuss the storage technique as Superconducting magnetic energy storage (SMES)
4. Discuss about super charging stations
5. Brief about Thermal storage systems
6. What are the Standards for EES?
7. Comparison in terms of Technical for EES technologies.

Unit-V

1. Discuss about Renewable energy storage system
2. Design the Battery sizing for stand-alone applications
3. Brief about Stationary Power Grid application
4. Write the Small scale application

5. How the Portable storage systems works for medical devices
6. Write the Mobile storage Applications
7. Discuss about Electric vehicles (EVs)
8. Classify the types of EVs,
9. Write Application of the batteries and fuel cells
10. Discuss the future technologies in EVs
11. Write the hybrid systems for energy storage.