

SVERI'S COLLEGE OF ENGINEERING, PANDHARPUR

Electrical Engineering Department

B. Tech, Semester-II

Subject: SMART GRID TECHNOLOGY

(ELECTIVE-II) Course Code: EL423.4-21

Date 16/05/23

Question Bank:

Unit 3: Electrifying rural India through Smart grid:

Electrifying rural India community and the challenges being faced. (Developing technology and systems that will enable smarter rural electrification, Financing programmes, Virtual power plants, Solar power, Geothermic power), Smart Utilities (case studies), Presentation on the Smart Grid Maturity Model (SGMM), Architecture for smart grids.

Q.N.	Questions
1	Write a short note on “wind and solar renewable energy sources
2	Why Do Utilities Use the Smart Grid Maturity Model (SGMM)?
3	What is geothermal energy and how does it work?
4	What are the advantages and disadvantages of geothermal energy?
5	How does geothermal energy work?
6	How wind is used to generate electricity
7	Explain architecture for smart grids in details
8	Explain domain wise architecture for smart grids in detail.
9	Explain Virtual power plant in details
10	What are Challenges in Rural electrification?
11	Explain Rural electrification: Challenges and the way ahead

Unit 4: Power Quality Issues in Smart Grid

Power Quality & EMC in Smart Grid, Power Quality issues of Grid connected Renewable Energy Sources, Power Quality Conditioners for Smart Grid, Web based Power Quality monitoring, Power Quality Audit.

Q.N.	Questions
1	How does Power Quality Management work in Smart Grid?
2	What is the role of Electromagnetic Compatibility (EMC) in Smart Grid?
3	Explain Relation between Voltage Quality and EMC.
4	Explain Power Quality Audit in Details. Also Specify Its Applications
5	Explain the Flow Chart of Procedure for Monitoring Power Quality and Issues of Power Quality Monitoring
6	What is the Future PQ Challenge in Smart Grid?
7	How the Smart Grid help improve power quality?
8	Draw Classification diagram of Power Quality Compensator and explain it in details
9	Explain Smart Grid help improve power quality.

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Assignment 3

Chapter 3

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Date 16/05/23

Assignment 4

Chapter 4

Q.No.	Questions
1	How does Power Quality Management work in Smart Grid?
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8	Draw Classification diagram of Power Quality Compensator and explain it in details
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