

- Q.18 What is islanding? What are its advantages. (CO3)
- Q.19 Writes the challenges of distributed generation system. (CO3)
- Q.20 What are the advantages of use of SCADA in power system. (CO4)
- Q.21 What is the key function of SCADA in smart grid. (CO4)
- Q.22 What are the key components used in Electric Car. (CO4)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Define Smart Grid. List its various components. Draw a figure to show various components. (Co1)
- Q.24 Explain the function of smart meter and its benefits. (CO2)
- Q.25 What is SCADA? Draw its basic structure. (Co4)
- (**Note:** Course outcome/CO is for office use only)

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6th Sem / Electrical

Subject : Smart Grid and Distributed Generation System

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 A conventional Grid system has- (CO1)
- Unidirectional flow of power
 - one way communication
 - Significant energy losses
 - all of these factors
- Q.2 A smart grid has (CO1)
- Higher Harmonic distortion
 - Problem of storage electrical energy
 - Integrates power by renewable energy
 - all of these
- Q.3 Full form of SCADA is- (CO2)
- System control and Data Access

- b) Supervisory Control and Data Acquisition
 - c) Signal Control and Data Analysis
 - d) Supervisory Communication and Data Architecture
- Q.4 Which of the following is an essential element of a Smart Grid?? (CO3)
- a) Manual Meter Reading
 - b) Centralized Power Generation Only
 - c) Advanced Metering Infrastructure (AMI)
 - d) Traditional Circuit Breakers
- Q.5 InAMI- (CO3)
- a) Instant decision can be taken
 - b) real time data is not available
 - c) Customer is not integrated with grid
 - d) not process bills of consumers
- Q.6 Distributed generation mostly uses- (CO4)
- a) Water as source of energy
 - b) coal as source of energy
 - c) Renewable as source of energy
 - d) none of the above

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SECTION-B

- Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)
- Q.7 Define a smart grid system? (CO1)
- Q.8 Indian Electricity Act was enacted in 2003.(T/F) (CO1)
- Q.9 What is self-healing? (CO2)
- Q.10 Write the full form of WLAN. (CO3)
- Q.11 ISLANDING prevents collapse of system during fault clearance.(T/F) (Co4)
- Q.12 Micro grid_____ the carbon emission. (CO4)

SECTION-C

- Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)
- Q.13 Explain the difference between smart grid and conventional grid. (CO1)
- Q.14 What is national smart grid mission? (CO1)
- Q.15 Discuss about the components of smart grid system. (CO2)
- Q.16 Explain the major benefits of implementing a smart grid system. (CO2)
- Q.17 What is RTU? Discuss its advantage and function. (CO3)

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