



CBCS SCHEME

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17EE833

Eighth Semester B.E. Degree Examination, July/August 2021 Integration of Distributed Generation

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Explain the properties of large and small hydro with their variation. With time. (10 Marks)
b. Explain the properties and space requirements of the solar power. (10 Marks)
- 2 a. Explain briefly, how power is produce from wind and also list out the property of wind power. (10 Marks)
b. List the different reasons for new type of power production in power system. (10 Marks)
- 3 a. Discuss any two possible schemes of interfacing distributed generation to grid. (10 Marks)
b. Explain the impact of distributed generation on the power system. (10 Marks)
- 4 a. Define hosting capacity. Discuss the different types of hosting capacity approaches. (10 Marks)
b. Write a note on voltage and current quality concerned to distributed generation. (10 Marks)
- 5 a. Explain the energy management systems in distributed generation. (10 Marks)
b. Explain the advanced protection schemes used during connecting large generator unit into the network. (10 Marks)
- 6 a. Explain the two stage and single stage boosting numerical approaches to voltage variations. (10 Marks)
b. Explain the basic design rules of distribution feeder. (10 Marks)
- 7 a. Explain the fast voltage functions in wind and solar power. (10 Marks)
b. Explain the statistical approach to hosting capacity. (10 Marks)
- 8 a. Explain how voltage unbalance occurs with connection of distributed generation. (10 Marks)
b. Explain how hosting capacity can be increased by dynamic voltage control. (10 Marks)
- 9 a. Explain the low frequency harmonics in induction and synchronous generators. (10 Marks)
b. Discuss the parallel and series resonance in Distributed generator connected voltage network. (10 Marks)
- 10 a. Write a short note on hosting and capacity increasing by :
i) Emission limits for other customers
ii) Higher disturbance levels. (10 Marks)
b. Explain how hosting capacity can be increased by strengthening the grid and with emission. Limits for generator units. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.