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18EE824

Eighth Semester B.E. Degree Examination, July/August 2022

Power System Planning

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain in detail the planning process. Also enumerate the components of planning. (10 Marks)
b. Explain the need and importance of load forecasting in power system. Mention the different techniques of load forecasting. (10 Marks)

OR

- 2 a. Explain enterprise resource planning with the module diagram. (10 Marks)
b. Write a short on : i) Reactive load forecast ii) Peak load forecast (10 Marks)

Module-2

- 3 a. Explain renovation and modernization of power plants. (10 Marks)
b. Write a short notes on : i) Rural Electrification Investment (10 Marks)
ii) Credit Risk Assessment.

OR

- 4 a. Explain the broad options available with respect to power sector finance. (10 Marks)
b. Explain the concept of clean coal technologies. (10 Marks)

Module-3

- 5 a. Enumerate the technical and economic aspects considered for sub-station development. Brief about various substation bus bar schemes. (10 Marks)
b. Illustrate the advantages and disadvantages of HVDC transmission system. Also mention few applications of HVDC transmission system. (10 Marks)

OR

- 6 a. Explain in detail the transmission planning criteria. (10 Marks)
b. Explain the planning criteria for reactive power compensation. (10 Marks)

Module-4

- 7 a. Explain the benefits of deregulation. (10 Marks)
b. Mention the adequacy indices in Distribution System Reliability Evaluation. (10 Marks)

OR

- 8 a. Explain the need for power system studies. (10 Marks)
b. Illustrate the concept of reliability by citing a suitable reliability model. (10 Marks)

Module-5

- 9 a. Enumerate the demand response programmes. (10 Marks)
b. Enumerate the principles of electricity market. (10 Marks)

OR

- 10 a. With a relevant block diagram explain the importance of energy efficiency programme. (10 Marks)
b. Write a short note on : i) Smart power market ii) Power pool. (10 Marks)
