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NPTEL

Unit 9 - Week 8

Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment. **Due on 2019-03-27, 23:59 IST.**

1) Which of the following statements is true regarding LOSF ? ***2 points***

1. For given parameters of a power system, the values of LOSF are constant.
2. For calculating GOSF, not only the line parameters are necessary, but also the information regarding the topology of the system is necessary.

- Only statement 1 is correct
- Only statement 2 is correct
- Both statements 1 and 2 are correct
- Both statements 1 and 2 are wrong

No, the answer is incorrect.
Score: 0

Accepted Answers:
Both statements 1 and 2 are correct

2) In a state estimation problem, the number of quantities to be estimated and number of measurements are 50 and 60 respectively. The dimensions of the gain matrix and the weight matrix are respectively ***2 points***

- (100 x 100) and (120 x 120)
- (50 x 50) and (60 x 60)
- (50 x 60) and (60 x 60)
- (50 x 50) and (50 x 60)

No, the answer is incorrect.
Score: 0

Accepted Answers:
(50 x 50) and (60 x 60)

3) In a state estimation problem, there are 4 measurements. The variances of these 4 meters ***2 points***

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No, the answer is incorrect.
Score: 0

Accepted Answers:
diag(100, 50, 200, 10)

4) Which of the following statements is true regarding state estimation? ***2 points***

1. The dimension of the error vector is equal to the dimension of the state vector.
2. The matrix connecting the measurement vector and the state vector is always a square matrix.

- Only statement 1 is correct
- Only statement 2 is correct
- Both statements 1 and 2 are correct
- Both statements 1 and 2 are wrong

No, the answer is incorrect.
Score: 0

Accepted Answers:
Both statements 1 and 2 are wrong

5) A power system engineer made following observations regarding state estimation. Which of the given options is true regarding these observations? ***2 points***

Observation A: Expected values of the errors are zero
Observation B: Expected values of the estimated quantities are equal to the corresponding true values.

- Observations A and B are independent, there is no relation between these observations.
- Observation A follows from observation B
- Observation B follows from observation A
- Both observations A and B are wrong

No, the answer is incorrect.
Score: 0

Accepted Answers:
Observation B follows from observation A

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