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reviewer4@nptel.iitm.ac.in ▼

Courses » Computer Aided Power System Analysis

Announcements **Course** Ask a Question Progress FAQ

Unit 2 - Week 1

Register for
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Course outline

How to access the portal

Week 1

Modeling of
Power System
Components

Modeling of
Power System
Components
(Contd.)

Bus Admittance
Matrix

Bus Admittance
Matrix with
Mutual
Impedance

Bus Admittance
Matrix with
mutual
impedance
(Contd.)

Quiz :
Assignment 1

Week 2

Week 3

Week 4

Week 5

Assignment 1

The due date for submitting this assignment has passed.

As per our records you have not submitted this assignment. **Due on 2019-02-13, 23:59 IST.**

1) **1 point**

From bus	To bus	Resistance (p.u)	Reactance (p.u)	Shunt half – line charging Susceptance (p.u)
1	2	0.01937	0.05916	0.05279
1	5	0.05402	0.22300	0.04920
2	3	0.04697	0.19794	0.04380
2	4	0.05810	0.17628	0.03740
3	4	0.06700	0.17099	0.03460
4	5	0.01335	0.04209	0.01280

Questions 1 to 6 are based on the above table.

The line data of a small 5 bus system is given above in the table:

1) The size of the Y_{BUS} matrix is :

- (5x5)
 (4x4)
 (6x6)
 (3x3)

No, the answer is incorrect.

Score: 0

Accepted Answers:

(5x5)

2) The $(2, 2)^{th}$ diagonal element of the Y_{BUS} matrix is :

2 points

- 7.9200 - j25.0324
 7.8200 - j25.0324
 7.8200 - i24.0324

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3) The $(3, 3)^{th}$ diagonal element of the Y_{BUS} matrix is : 0 points

3.1217 - j8.2722
 3.0217 - j9.2722
 3.1217 - j9.2722
 3.2217 - j9.2722

No, the answer is incorrect.
Score: 0

Accepted Answers:
3.1217 - j9.2722

4) The $(4,4)^{th}$ diagonal element of the Y_{BUS} matrix is : 2 points

10.5199 - j30.6890
 11.5199 - j31.6890
 10.5199 - j32.6890
 10.5199 - j31.6890

No, the answer is incorrect.
Score: 0

Accepted Answers:
10.5199 - j31.6890

5) The $(2,3)^{th}$ element of the Y_{BUS} matrix is : 1 point

-1.1349 + j4.6827
 -1.1349 + j4.7827
 -1.0349 + j4.7827
 -1.1349 + j4.8827

No, the answer is incorrect.
Score: 0

Accepted Answers:
-1.1349 + j4.7827

6) The $(3,4)^{th}$ element of the Y_{BUS} matrix is : 1 point

-1.8866 + j5.0699
 -1.9866 + j4.9699
 -1.9866 + j5.0699
 -1.9866 + j5.1699

No, the answer is incorrect.
Score: 0

Accepted Answers:
-1.9866 + j5.0699

7) In a 100 bus power system, the line between buses 2 and 9 is mutually coupled with the line between buses 23 and 45. 1 point

The size of the Y_{BUS} matrix, after considering the mutual coupling is :

(102×102)
 (101×101)
 (99×99)
 (100×100)

No, the answer is incorrect.

Score: 0

Accepted Answers:

(100 x 100)

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