Started on	Friday, 28 October 2022, 8:55 AM
State	Finished
Completed on	Friday, 28 October 2022, 9:00 AM
Time taken	4 mins 25 secs
Grade	**65.0** out of 100.0

Question 1

Complete

Not graded

Given a balanced three phase system with a star-connected load for which the line voltage is 208V and impedance of each phase is $3 + j4\ \Omega$. What is:

Answer: √3z

The correct answer is: 0

Question 2

Correct

Mark 5.0 out of 5.0

the magnitude of the phase voltage, in V? [1 decimal place]

Answer: 120.1

✔

The correct answer is: 120.1

Question 3

Correct

Mark 5.0 out of 5.0

the magnitude of the load impedance, in Ω?[1 decimal place]

Answer: 5.0

The correct answer is: 5

Question 4

Correct

Mark 5.0 out of 5.0

the angle of the load impedance, in ° ? [1 decimal place]

Answer: 53.1

The correct answer is: 53.1

Question 5

Correct

Mark 3.0 out of 3.0

the magnitude of the phase current, in A? [1 decimal place]

Answer: 24.0

The correct answer is: 24

Question 6

Correct

Mark 5.0 out of 5.0

the magnitude of the line current, in A? [1 decimal place]

Answer: 24.0

✔

The correct answer is: 24

Question 7

Correct

Mark 5.0 out of 5.0

real power for each phase, in W? [whole number, i.e., 0 decimal places]

Answer: 1731

✔

The correct answer is: 1731

Question 8

Correct

Mark 5.0 out of 5.0

the total real power delivered to the load, in W? [whole number, i.e., 0 decimal places]

Answer: 5193

✔

The correct answer is: 5192

Question 9

Correct

Mark 5.0 out of 5.0

the total apparent power delivered to the load, in VA? [whole number, i.e., 0 decimal places]

Answer: 8649

✔

The correct answer is: 8653

Question 10

Not answered

Not graded

If the same load is now delta-connected, while keeping the line voltage the same, what is:

Answer:

The correct answer is: 0

Question 11

Correct

Mark 2.0 out of 2.0

the magnitude of the phase voltage, in V? [1 decimal place]

Answer: 208.0

✔

The correct answer is: 208

Question 12

Correct

Mark 5.0 out of 5.0

the magnitude of the phase current, in A? [1 decimal place]

Answer: 41.6

The correct answer is: 41.6

Question 13

Correct

Mark 5.0 out of 5.0

the magnitude of the line current, in A? [1 decimal place]

Answer: 72.1

The correct answer is: 72.1

Question 14

Correct

Mark 5.0 out of 5.0

the total real power delivered to the load, in kW? [1 decimal place]

Answer: 15.6

The correct answer is: 15.6

Question 15

Correct

Mark 5.0 out of 5.0

the total apparent power delivered to the load, in kVA? [1 decimal place]

Answer: 26.0 ✔

The correct answer is: 26

Question 16

Not answered

Marked out of 10.0

the reading of the first wattmeter in the two-wattmeter method (i.e. the higher value), in kW? [1 decimal place]

Answer: ✖

The correct answer is: 12.4

Question 17

Not answered

Marked out of 5.0

the reading of the second wattmeter in the two-wattmeter method (i.e. the lower value), in kW? [1 decimal place]

Answer: ✖

The correct answer is: 3.2

Question 18

Not answered

Not graded

If the impedance per phase in the delta connection is adjusted, maintaining balanced load condition, so that the two-wattmeter method now has readings of +4.0 kW and +8.0 kW, for the respective first and second wattmeter, what is:

Answer:

The correct answer is: 0

Question 19

Correct

Mark 5.0 out of 5.0

the total real power delivered to the load, in kW? [1 decimal place]

Answer: 12.0

The correct answer is: 12

Question 20

Incorrect

Mark 0.0 out of 10.0

the power factor of the load? [1 decimal place]

Answer: 0.9

The correct answer is: 0.87

Question **21**

Incorrect

Mark 0.0 out of 10.0

the reading of a wattmeter connected in a manner to measure total reactive power, in kW? [1 decimal place]

Answer: 6.0

✖

The correct answer is: 3.5

◄ EXAMPLES

Jump to...

LECTURE 7: 2021-08-18 (1100 - 1300 HRS) ►