Started on	Monday, 4 March 2024, 8:01 PM
State	Finished
Completed on	Monday, 4 March 2024, 8:01 PM
Time taken	12 secs
Marks	0.00/16.00
Grade	**0.00** out of 10.00 (**0**%)

Question **1**

Not answered

Marked out of 1.00

1. True power is measured in_____and is a measure of the_____.

a. (b) volt-amps ; power consumed

b. (c) watts; power consumed

c. (a) volt-amps; power supplied

d. (d) watts; power supplied

Your answer is incorrect.

The correct answer is:
(c) watts; power consumed

Question **2**

Not answered

Marked out of 1.00

1. In a purely resistive circuit there is no:

a. (a) apparent power

b. (b) true power

c. (c) average power

d. (d) reactive power

Your answer is incorrect.

The correct answer is:
(d) reactive power

Question **3**

Not answered

Marked out of 1.00

1. In a power triangle, apparent power is represented by the:

a. (a) side adjacent the phase angle

b. (b) hypotenuse

c. (c) side opposite the phase angle

d. (d) cosine of the phase angle

Your answer is incorrect.

The correct answer is:
(b) hypotenuse

Question **4**

Not answered

Marked out of 1.00

1. Power factor is a ratio of:

a. 1. Power factor is a ratio of:

(b) true power to reactive power

b. (a) reactive power to apparent

c. (c) apparent power to true power

d. (d) true power to apparent power

Your answer is incorrect.

The correct answer is:
(d) true power to apparent power

Question **5**

Not answered

Marked out of 1.00

1. The power consumed in a circuit is determined by:

a. (d) true power plus the power factor

b. (c) reactive power times the power factor

c. (b) apparent power divided by the power factor

d. (a) apparent power times the power factor

Your answer is incorrect.

The correct answer is:
(a) apparent power times the power factor

Question **6**

Not answered

Marked out of 1.00

1. A heating element connected to a 240V, 50Hz supply draws 10A. Determine the:

(a) the circuit phase angle.

(b) apparent power of the circuit;

(c) true power consumed by the circuit.

a. (0^{O}) (2400VA) (2400W)

b. (0^{O}) (4800VA) (4800W)

c. (0^{O}) (1200VA) (1200W)

Your answer is incorrect.

The correct answer is:
(0^{O}) (2400VA) (2400W)

Question **7**

Not answered

Marked out of 1.00

1. A single phase load draws 2.5A from a 32V, 50Hz supply. If the power consumed by the circuit is 60W, determine the:

(a) the circuit impedance;

(b) apparent power of the circuit;

(c) circuit power factor;

(d) circuit phase angle;

(e) reactive power of the circuit; (

a. (12.8ohm) (80VA) (0.75) (41.4^{O}) 52.9VAr)

b. (32.8ohm) (8VA) (0.85) (41.4^{O}) 52.9VAr)

c. 212.8ohm) (100VA) (0.75) (41.4^{O}) 52.9VAr)

Your answer is incorrect.

The correct answer is:
(12.8ohm) (80VA) (0.75) (41.4^{O}) 52.9VAr)

Question **8**

Not answered

Marked out of 1.00

1. Positive phase sequence is represented by:

a. (a) B-A-C

b. (d) A-C-B

c. (b) C-B-A

d. (c) A-B-C

Your answer is incorrect.

The correct answer is:
(c) A-B-C

Question **9**

Not answered

Marked out of 1.00

1. Single phase loads can be connected to a three phase distribution system that is:

a. (a) delta connected with three wires

b. (b) delta connected with four wires

c. (c) star connected with three wires

d. (d) star connected with four wires

Your answer is incorrect.

The correct answer is:
(d) star connected with four wires

Question **10**

Not answered

Marked out of 1.00

1. In a star connected system, the phase angle between the line voltage and phase voltage is:

a. () 90^O

b. () 0^O

c. () 120^O

d. () 30^O

Your answer is incorrect.

The correct answer is:
() 120^O

Question **11**

Not answered

Marked out of 1.00

1. The minimum number of fixed wattmeters required to measure the power consumed by a three phase, four wire unbalanced system is:

a. () three

b. () two

c. () one

d. () four

Your answer is incorrect.

The correct answer is:
() two

Question **12**

Not answered

Marked out of 1.00

1. The total power in a three phase system can be measured using a single wattmeter provided the:

a. () load is unbalanced

b. () load is balanced

c. () load is star connected

d. () neutral is not connected

Your answer is incorrect.

The correct answer is:
() load is balanced

Question **13**

Not answered

Marked out of 1.00

An indication that harmonics are present in a three phase supply system would be:

a. (c) low nuetral currents

b. (b) low transformer currents

c.

r

(d) lower power consumption

d. (a) erratic motor behaviour

Your answer is incorrect.

The correct answer is:
(c) low nuetral currents

Question **14**

Not answered

Marked out of 1.00

1. A 415V uses the two wattmeter method to measure its total power consumption. If W1 indicates -750W and W2 indicates 2 kW, determine:

(a) the Total power supplied to the load;

(b) the Power factor for the load;

(c) the Line current for the load;

the Impedance of each phase of the load if the load is star connected.

a. (1250W) (0.254 lead) (6.85A) (35.2 ohm)

b. (2750W) (0.254 lead) (6.85A) (35.2 ohm)

c. (1250W) (0.**8** lead) (6.85A) (35.2 ohm)

Your answer is incorrect.

The correct answer is:
(1250W) (0.254 lead) (6.85A) (35.2 ohm)

Question **15**

Not answered

Marked out of 1.00

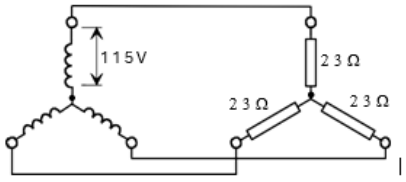
1. For the circuit of figure 3, determine the:

(a) line voltage output of the transformer secondary;

(b) phase voltage of the heating load;

(c) line current from the transformer to the load;

(d) power used by the load, assuming the power factor is unity



Transformer Secondary | 3 Phase Heater

Figure 3

a. (400V) (115V) (5A) (1.732kW)

b. (200V) (115V) (5A) (1.732kW)

c. (4000V) (2305V) (5A) (1.732kW)

Your answer is incorrect.

The correct answer is:
(200V) (115V) (5A) (1.732kW)

Question **16**

Not answered

Marked out of 1.00

1. A delta connected transformer secondary supplies a star connected inductive load. The power consumption of the load is measured at 15kW at a power factor of 0.695. If the phase current of the load is 30A, determine the:

(a) line voltage output of the transformer;

(a) phase voltage of the load;

(b) phase angle for the load;

(c) current in the transformer windings.

a. (415V) (240V) (46^{O} lag) (17.32A)

b. (230V) (115V) (46^{O} lag) (17.32A)

c. (230V) (115V) (30^{O} lag) (17.32A)

Your answer is incorrect.

The correct answer is:
(415V) (240V) (46^{O} lag) (17.32A)

◄ Week 3 Quiz

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