Started on	Monday, 4 March 2024, 6:03 PM
State	Finished
Completed on	Monday, 4 March 2024, 6:03 PM
Time taken	12 secs
Marks	0.00/28.00
Grade	**0.00** out of 10.00 (**0**%)

Question **1**

Not answered

Marked out of 1.00

In a parallel circuit the supply current is equal to the:

a. total power multiplied by the supply voltage

b. supply voltage divided by the resistance of any one branch

c. sum of the branch currents

d. ratio of the branch currents

Your answer is incorrect.

The correct answer is:

sum of the branch currents

Question **2**

Not answered

Marked out of 1.00

Connecting resistors in parallel produces the same general effect as:

a. increasing the cross-sectional area of a conductor

b. increasing the temperature of a metallic conductor

c. increasing the length of a conductor

d. decreasing the conductance of a conductor.

Your answer is incorrect.

The correct answer is:

decreasing the conductance of a conductor.

Question **3**

Not answered

Marked out of 1.00

When three 10Ω resistors are connected in parallel to each other, the voltage drop across each is:

a. one third of the supply voltage

b. supply voltage divided by 10

c. supply voltage divided by 30.

d. equal to the supply voltage

Your answer is incorrect.

The correct answer is:

equal to the supply voltage

Question **4**

Not answered

Marked out of 1.00

The lowest value of resistance in any parallel combination of resistors is always:

.

a. (b) less than the equivalent resistance of the combination.

b. (d) greater than the equivalent resistance of the combination

c. (a) equal to the equivalent resistance of the combination.

d. (c) dependent on voltage and current for its resistance.

Your answer is incorrect.

The correct answer is:
(d) greater than the equivalent resistance of the combination

Question **5**

Not answered

Marked out of 1.00

1. Twenty five resistors each with a resistance of 100 Ω are connected in parallel with each other. The equivalent resistance of the combination is:

a. (d) 25 Ω

b. (a) 100 Ω

c. (c) 4 Ω

d. (b) 2500 Ω

Your answer is incorrect.

The correct answer is:
(c) 4 Ω

Question **6**

Not answered

Marked out of 1.00

1. A parallel circuit is defined as a circuit with:

a. (c) only one current path

b. (b) more than one current path

c. (a) more than one resistor

d. (d) more than one supply voltage

Your answer is incorrect.

The correct answer is:
(b) more than one current path

Question **7**

Not answered

Marked out of 1.00

1. If an extra parallel connected resistor is added to a circuit, the equivalent resistance of the circuit will:

(

a. (a) increase

b. (b) remain unchanged

c. (c) decrease

d. (d) cause the applied voltage to increase.

Your answer is incorrect.

The correct answer is:
(c) decrease

Question **8**

Not answered

Marked out of 1.00

1. The voltage in a parallel circuit:

a. (a) is the same in all parts of the circuit

b. (d) increases with increase resistance.

c. (b) decreases through the circuit from resistor to resistor

d. (c) greater than the supply voltage

Your answer is incorrect.

The correct answer is:
(a) is the same in all parts of the circuit

Question **9**

Not answered

Marked out of 1.00

1. The voltages in the parallel section of a series-parallel circuit:

a. (d) decrease through the circuit from component to component

b. (a) are affected by the circuit equivalent resistance

c. (c) are the same across the parallel components

d. (b) are difficult to determine

Your answer is incorrect.

The correct answer is:
(c) are the same across the parallel components

Question **10**

Not answered

Marked out of 1.00

1. If one resistor in the parallel section of a series-parallel circuit goes open circuit, the circuit power dissipation will:

a. (b) decrease.

b. (d) decrease to zero.

c. (a) remain constant.

d. (c) increase.

Your answer is incorrect.

The correct answer is:
(b) decrease.

Question **11**

Not answered

Marked out of 1.00

1. The power dissipation of any circuit:

a. (b) equal to the product of the power dissipation of each resistor.

b. (a) equal to the sum of the power dissipation of each resistor.

c. (c) equal to the supply voltage squared times the circuit equivalent resistance.

d. (d) depends on the circuit arrangement.

Your answer is incorrect.

The correct answer is:
(a) equal to the sum of the power dissipation of each resistor.

Question **12**

Not answered

Marked out of 1.00

In the circuit of figure 12, the supply current is equal to the:

(a) value of branch currents.

(b) product of the branch currents.

(c) sum of the currents in each resistor.

(d) sum of the branch currents.

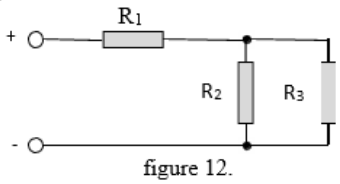

figure 12.

+

-

a. (d) sum of the branch currents.

b. (a) value of branch currents.

c. (c) sum of the currents in each resistor.

d. (b) product of the branch currents.

Your answer is incorrect.

The correct answer is:
(d) sum of the branch currents.

Question **13**

Not answered

Marked out of 1.00

For the circuit of figure 14, determine the -

(a) equivalent circuit resistance
(b) circuit current
(c) voltage drop across resistor R1

(d) voltage drop across R2 and R3
(e) currents in resistors R2 and R3
(f) total power dissipated

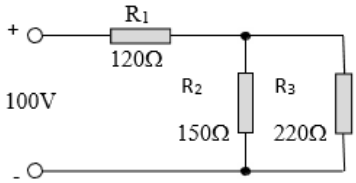

figure 14

a. 209.19 Ohm / 0.478A/ 57.36V / 42.63V/ 0.284A, 0.193A/47.8W

b. 109.19 Ohm / 1.478A/ 87.36V / 52.63V/ 1.284A, 0.193A/87.8W

Your answer is incorrect.

The correct answer is:
209.19 Ohm / 0.478A/ 57.36V / 42.63V/ 0.284A, 0.193A/47.8W

Question **14**

Not answered

Marked out of 1.00

For the circuit of figure 15, determine the –

(a) equivalent resistance
(b) current in each branch
(c) supply current

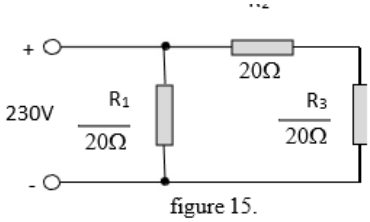

figure 15.

d power dissipated by each component (4408W, 863.3W, 647.47W)

e total power dissipation

a. 13.33 Ohm, 11.5A, 5.75A. 17.25A/ 2645W,661.25W,661.25W, 3967.5W

b. 13.33 Ohm, 15A, 5A. 20A/ 2645W,661.25W,661.25W, 3967.5W

Your answer is incorrect.

The correct answer is:
13.33 Ohm, 11.5A, 5.75A. 17.25A/ 2645W,661.25W,661.25W, 3967.5W

Question **15**

Not answered

Marked out of 1.00

1. The resistance of a conductor is said to be:

a. (c) proportional to its cross-sectional area.

b. (b) inversely proportional to its length.

c. (d) inversely proportional to its resistivity.

d. (a) proportional to its length.

Your answer is incorrect.

The correct answer is:
(a) proportional to its length.

Question **16**

Not answered

Marked out of 1.00

1. If all other factors remain constant while the length of a conductor is halved, the resistance of the conductor is:

a. (d) quartered

b. (c) halved

c. (b) squared

d. (a) doubled.

Your answer is incorrect.

The correct answer is:
(c) halved

Question **17**

Not answered

Marked out of 1.00

2. The voltmeter sensitivity or the resistance of a voltmeter is given in terms of:

a. (d) ampere per volt.

b. (c) volts per ampere

c. (a) volts per ohm

d. (b) ohms per volt

Your answer is incorrect.

The correct answer is:
(b) ohms per volt

Question **18**

Not answered

Marked out of 1.00

2. An AVO-7 multimeter has a sensitivity of 500 ohms/volt. Determine the resistance of the meter when used on the:

(a) 25 V range

(b) 1000 V range.

- a. 22500 ohm, 5Mega Ohm
- b. 12500 ohm, 0.5Mega Ohm
- c. 32500 ohm, 1.5Mega Ohm

Your answer is incorrect.

The correct answer is:
12500 ohm, 0.5Mega Ohm

Question **19**

Not answered

Marked out of 1.00

Determine

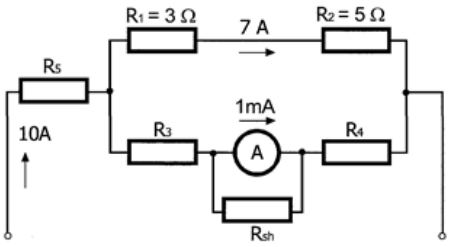

figure 19

(a) the value of the current through Rsh.
(b) the voltage drop across R_2
(c) the power rating of R_1

- a. 2.99 A, 35V, 147W
- b. 3A,40V, 150W
- c. 7A, 30V, 147W

Your answer is incorrect.

The correct answer is:
2.99 A, 35V, 147W

Question **20**

Not answered

Marked out of 1.00

1. Which of the following cannot be used as a dielectric:

a. (b) paper

b. (c) carbon

c. (d) polyester

d. (a) air

Your answer is incorrect.

The correct answer is:
(c) carbon

Question **21**

Not answered

Marked out of 1.00

1. Decreasing the plate area of a capacitor:

a. (c) decreases its capacitance

b. (b) does not effect its capacitance

c. (a) increases its capacitance

d. (d) increases its dielectric strength

Your answer is incorrect.

The correct answer is:
(c) decreases its capacitance

Question **22**

Not answered

Marked out of 1.00

1. The practical unit of capacitance is the:

a. (a) micro-coulomb

b. (c) micro-farad

c. (d) farad.

d. (b) milli-farad

Your answer is incorrect.

The correct answer is:
(c) micro-farad

Question **23**

Not answered

Marked out of 1.00

1. An R-C circuit consists of a resistance of 120kΩ and a capacitance of 36μF. Determine the -

(a) time constant of the circuit

(b) time taken for the capacitor to fully charge.

a. (5.32 seconds) (30 seconds)

b. (4.32 seconds) (21.6 seconds)

c. (3.32 seconds) (20.6 seconds)

Your answer is incorrect.

The correct answer is:
(4.32 seconds) (21.6 seconds)

Question **24**

Not answered

Marked out of 1.00

1. An R-C circuit has an applied voltage of 24V. What is the voltage across the capacitor after one time constant.

a. 15.17V

b. 12V

c. 10V

Your answer is incorrect.

The correct answer is:
15.17V

Question **25**

Not answered

Marked out of 1.00

Two, 2μF capacitors connected in parallel will have a total capacitance of:

a. 1

b. 4

c. 2

d. 0.5

Your answer is incorrect.

The correct answer is:
4

Question **26**

Not answered

Marked out of 1.00

Two, 4μF capacitors connected in series will have a total capacitance of:

a. 4

b. 0.5

c. 2

d. 1

Your answer is incorrect.

The correct answer is:
2

Question **27**

Not answered

Marked out of 1.00

Three capacitors having capacitances of 4, 6 and 12μF are connected in series across a 120V supply. Calculate the –

(a) equivalent capacitance

(b) total charge stored

(c) charge stored on each capacitor

a. (1μF)(0.00048C) (0.00048C)

b. (2μF)(0.00024C) (0.00024C)

Your answer is incorrect.

The correct answer is:
(2μF)(0.00024C) (0.00024C)

Question **28**

Not answered

Marked out of 1.00

Three capacitors are connected in series have an equivalent capacitance of 10μF. If two of them have capacitances of 30 and 60μF, determine the capacitance of the third capacitor.

a. 5

b. 20

c. 15

d. 10

Your answer is incorrect.

The correct answer is:
20

◄ Week 1 Quiz

Jump to...