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Parallel Circuits MCQ Test

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Below is the **Parallel Circuits MCQ** test that checks your basic knowledge of Parallel Circuits. This **Parallel Circuits MCQ Test** contains 20 Multiple Choice Questions. You have to select the right answer to the question. Finally, you can also take the Online Quiz from the Take **Parallel Circuits Quiz** Button.

Q1. What is the product-over-sum result of 150 and 6800?

- A. 0.006
- **B. 146.7**
- C. 6800
- D. 150

Q2. When parallel resistors are of three different values, which has the greatest power loss?

- A. The largest resistance
- **B. The smallest resistance**
- C. They have the same power loss.
- D. Voltage and resistance values are needed.

Q3. The voltage across any branch of a parallel circuit

- **A. is equally applied to all branch conductances**
- B. is inversely proportional to total circuit resistance
- C. is dropped in proportion to each branch resistance
- D. None of the above

Q4. Components that connect in parallel form

- **A. Branches**

- B. Open circuits
- C. Short circuits
- D. A voltage divider

Q5. Kirchhoff's current law for parallel circuits states that the

- A. sum of all branch voltages equals zero
- B. total circuit resistance is less than the smallest branch resistor
- C. sum of currents into a junction is equal to the difference of all the branch currents
- **D. sum of the total currents flowing out of a junction equals the sum of the total currents flowing into that junction**

Q6. A parallel circuit is also used as a divider for

- A. power
- B. voltage
- **C. current**
- D. conductance

Q7. Which of the following are the better test devices used to isolate a suspected open component within a parallel circuit?

- A. A wattmeter or a voltmeter
- B. A voltmeter or an ohmmeter
- **C. An ammeter or an ohmmeter**
- D. Neither an ammeter nor a voltmeter

Q8. Which is considered to be the common reference for a parallel circuit?

- A. Power
- B. Current
- **C. Voltage**
- D. Resistance

Q9. The total resistance in a parallel circuit is always less than the least resistor.

- **A. True**
- B. False

Q10. A parallel circuit is sometimes called a current divider.

- **A. True**
- B. False

Q11. An open resistor in parallel will cause the total ____ to increase.

- A. Current
- B. Voltage
- C. Power
- **D. Resistance**

Q12. Three lights are connected in parallel across a 120 volt source. If one light burns out,

- A. The remaining two will not light
- B. The remaining two will glow dimmer
- C. The remaining two will glow brighter
- **D. The remaining two will glow with the same brightness as before**

Q13. Does a parallel circuit act as a current divider?

- **A. True**
- B. False

Q14. The total resistance is smaller than the smallest resistance in the circuit in a _____ circuit.

- A. Series
- **B. Parallel**
- C. Both Series & Parallel
- D. Either Series & Parallel

Q15. The current in each branch of a parallel circuit is proportional to which of the following?

- A. Equal in all branches

- B. Proportional to the power in the circuit
- C. The amount of time the circuit is on for
- **D. Proportional to the value of the resistors**

Q16. When an additional resistor is connected across an existing parallel circuit, the total resistance

- **A. Decreases**
- B. Remains the same
- C. Decreases by the value of the add resistor
- D. None of the above

Q17. If one of the resistors in a parallel circuit is removed, the total resistance

- A. Doubles
- **B. Increases**
- C. Decreases
- D. Remains the same

Q18. A circuit is parallel between two points if

- A. the voltage divides
- B. all resistors are equal
- C. there is only one current path
- **D. more than one current path exists**

Q19. Which of the following is most cost efficient connection?

- **A. Series**
- B. Parallel
- C. Both Series & Paralles
- D. None of above

Q20. In a certain five-step R/2R ladder network, the smallest resistor value is

- **A. 2 k?**
- **B. 10 k?**
- **C. 20 k?**
- **D. Indeterminable**

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