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Series Parallel Circuits MCQ Test

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Below is the **Series Parallel Circuits MCQ** test that checks your basic knowledge of Series Parallel Circuits. This **Series 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 **Series Parallel Circuits Quiz** Button.

Q1. Batteries are generally connected in

- A. Parallel
- **B. Series**
- C. Either series or parallel
- D. None of the above

Q2. A 470 Ω resistor, a 220 Ω resistor, and a 100 Ω resistor are all in parallel. The total resistance is approximately

- A. 30 Ω
- B. 60 Ω
- **C. 470 Ω**
- D. 790 Ω

Q3. What is the smallest resistor value in a certain five-step R/2R ladder network?

- **A. 2 k Ω**
- B. 10 k Ω
- C. 20 k Ω
- D. None of the above

Q4. A Voltage divider consists of two 68 k Ω resistors and a 24 V source. What is the unknown output voltage?

- A. 0 V
- B. 6 V
- C. 12 V
- D. 24 V

Q5. Batteries are generally connected in

- A. Series
- B. Parallel
- C. Either series or parallel
- D. None of the above

Q6. Which of the following is the most cost-efficient connection?

- A. Parallel
- B. Series
- C. Either series or parallel
- D. Both series or parallel

Q7. It is preferable to connect bulbs in series or in parallel?

- A. Series
- B. Parallel
- C. Both series and parallel
- D. Neither series nor parallel

Q8. Bulbs are generally connected in_____.

- A. Series
- B. Parallel
- C. Either series or parallel
- D. Neither series nor parallel

Q9. In a series circuit, the total resistance is greater than the largest resistance in the circuit.

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

Q10. In a _____ circuit, the total resistance is smaller than the smallest resistance in the circuit.

- A. Series
- **B. Parallel**
- C. both (A) and (B)
- D. None of the above

Q11. Is series circuit is the most cost efficient connection?

- **A. Yes**
- B. No

Q12. In series circuit, total resistance R_t is calculated with the formula ____.

- **A. $R_t = R_1 + R_2 + R_3 + \dots$**
- B. $R_t = R_1 - R_2 - R_3$
- C. $R_t = 1/(R_1 + R_2 + R_3)^{-1}$
- D. Both A and B

Q13. You can find total resistance in a Parallel circuit with the following formula:

- A. $R_t = R_1 + R_2 + R_3 + \dots$
- **B. $1/R_t = 1/R_1 + 1/R_2 + 1/R_3 + \dots$**
- C. Both A and B
- D. None of the above

Q14. A certain circuit is composed of two parallel resistors. The total resistance is 1,403 ?. One of the resistors is 2 ?. The other resistor value is ____.

- A. 1,403 ?
- **B. 4.7 k?**
- C. 2 k?
- D. 3,403 ?

Q15. On which of the following voltage range settings will a voltmeter present minimum load on a circuit?

- A. 1 V
- B. 50 V
- C. 500 V
- **D. 1,000 V**

Q16. A Voltage divider consists of two 68 k Ω resistors and a 24 V source. The unknown output voltage is ____.

- **A. 12 V**
- B. 24 V
- C. 0 V
- D. 6 V

Q17. A galvanometer is a meter that measures small amounts of voltage.

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

Q18. The internal resistance of a 20,000 ohm/volt voltmeter set on its 5 V range is ____.

- A. 20,000 ?
- **B. 100,000 ?**
- C. 200,000 ?
- D. 1,000,000 ?

Q19. A smaller-value load resistor will cause the output voltage to change more than a larger-value one.

- **A. True**

- **B. False**

Q20. In series, if one bulb goes out, others will :

- A. stay
- **B. on also turn off**
- C. blow up
- D. heat up

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