

Basics of Analog Multiplexers – 2

Multiple choice quiz

TI Precision Labs – Op Amps



Quiz: Basics of Analog Multiplexers – 2

1. Leakage current of a multiplexer
 - a. Introduces offset error
 - b. Varies with temperature
 - c. affects settling behavior of multiplexer
 - d. Both a and b

2. A multiplexer with a leakage current of 1nA interfaced with a 100k Ohm input impedance source can introduce
 - a. 10uV of offset error at input of the MUX
 - b. 100uV of error at input of the MUX
 - c. No offset error at input of the MUX
 - d. None of the above

Quiz: Basics of Analog Multiplexers – 2

3. Charge Injection effect is
 - a. Settling error introduced at the output of switch when switch is turned ON or OFF
 - b. Charge injected in power supply bypass capacitors when switch is turned ON or OFF
 - c. Amount of voltage change introduced at the output of switch when switch is turned ON or OFF
 - d. Both b and c

4. For a larger load capacitor at the output of a multiplexer,
 - a. More voltage error is introduced by charge injection
 - b. Less voltage error is introduced by charge injection
 - c. There is no relation with charge injection effect
 - d. None of the above

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5. The charge injection parameter of a multiplexer can have one of the following units
 - a. Pico Coulomb
 - b. Pico Farad
 - c. Micro Volt
 - d. None of the above

6. A multiplexer with a charge injection of 1pC and a load capacitance of 50pF can introduce a voltage error of ____ when the switch is turned ON or OFF.
 - a. 20mV
 - b. 50mV
 - c. 5mV
 - d. None of the above

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