Stability 1

Multiple Choice Quiz

TI Precision Labs – Op Amps

Quiz: Stability 1

1. What are some possible signs of an unstable op amp circuit?

a. Oscillations
b. Large overshoot and ringing
c. Unpredictable or Unexpected Response
d. All of the above.

2. (T/F) Many common circuits inadvertently cause delay in the feedback network resulting in stability issues.

a. True
b. False

3. What are some possible causes amplifier instability?

a. Capacitance on the amplifiers output.
b. Capacitance on the amplifiers inverting input.
c. Large value feedback resistors.
d. All of the above.

Quiz: Stability 1

4. Which common application is most likely to have a stability issues? Photodiode Transimpedance Amplifier

a. Low-Noise Gain Stage
b. Summing Amplifier
a. Integrator

5. Amplifiers with stability problems are_____.

a. Only sensitive to transients on the input.
b. Sensitive to transients on the input, output, and the power supplies.

6. (T/F) Amplifiers with dc inputs (e.g. reference buffer) will not have stability issues.

a. True
b. False

Quiz: Stability 1

7. Describe a common setup used for stability testing.

a. Monitor the amplifier output with an oscilloscope and apply a sinusoidal input signal.
b. Monitor the amplifier output with an oscilloscope and apply a square wave input signal.
c. Monitor the amplifier output with an oscilloscope and apply a triangle wave input signal.

8. How can a gain / phase analyzer be used to test for stability?

a. AC gain peaking
b. Rapid phase shifts
c. Unexpected gains
d. All of the above

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Multiple Choice Quiz: Solutions

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