

Noise 1

Multiple Choice Quiz

TI Precision Labs – Op Amps



Quiz: Noise 1

1. Examples of intrinsic Noise are ____.

- a. 60Hz pickup
- b. Capacitive coupling of digital signals
- c. Thermal noise from resistors
- d. Noise generated by op amps
- e. Both a and b are correct
- f. Both c and d are correct

2. A common amplifier noise model contains ____.

- a. An input and output noise voltage source.
- b. An input current noise source, and voltage noise source.
- c. An equivalent input resistance.

3. Thermal Noise is ____.

- a. Generated by resistors
- b. Generated by semiconductor junctions
- c. Dependent on current flow
- d. Dominant at low frequencies.

Quiz: Noise 1

4. The 1/f noise region occurs at ____.

- a. Low frequency
- b. High frequency

5. How do you convert peak-to-peak to rms?

- a. $\text{Noise}_{pp} = 6 \times (\text{spectral density})$
- b. $\text{Noise}_{pp} = 6 \times (\text{Total rms noise})$
- c. $\text{Noise}_{pp} = 1.57 \times \text{BW}$
- d. $\text{Noise}_{pp} = (\text{spectral density}) \times (\text{BW})$

6. Voltage noise spectral density has units of ____.

- a. nV/Hz
- b. nV/A
- c. nV/rtHz
- d. pA/Hz

Quiz: Noise 1

7. How do you find the total noise for two series noise sources (V_{n1} , and V_{n2})?

- a. Add them ($V_{n1} + V_{n2}$)
- b. Take the square root of the sum of the noise terms squared.
- c. Average the two sources.
- d. Multiply the two terms.

8. What is the difference between RMS and standard deviation?

- a. Standard deviation eliminates the average value, but RMS includes it.
- b. There is no difference.
- c. $\text{RMS} = 6 \times \text{Standard Deviation}$

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Multiple Choice Quiz: Solutions

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