

**Quiz: Week 1 Lecture 1**  
**Principles of Electronic Nanobiosensors**  
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Answer the **four questions** below by choosing the **one, best answer**.

- 1) Nanobiosensors are necessary because
  - a) Biomolecules cannot be detected by traditional sensors at all.
  - b) Biomolecules move too fast in a fluidic environment; large sensors cannot capture them.
  - c) Nanobiosensors require very little energy to operate.
  - d) Nanobiosensors can detect biomolecules at ultra-low concentrations.
  
- 2) Which of the following is true about the nanobiosensors?
  - a) These sensors are the first to integrate electronics with biotechnology.
  - b) All the dimensions of these sensors must be measured in nanometers.
  - c) At least one of the sensor dimensions should be measured in nanometers.
  - d) Only nanobiosensors can read the DNA sequence of a human genome.
  
- 3) Nanobiosensors may enable Lab-on-a-Chip technology, because
  - a) The sensors can be miniaturized.
  - b) The sensors can be integrated with other electronic components.
  - c) They can operate with small analyte volume.
  - d) All of the above.
  
- 4) The phrase 'personalized medicine' refers to
  - a) The right to choose a personal doctor for every citizen.
  - b) A guarantee that the genetic information remains private and will not be shared.
  - c) The ability to tailor medication to a person's genetic information so that the harmful side-effects are reduced.
  - d) The cost of the medicine is tailored according to the ability to pay.

**End of quiz. This quiz contains 4 questions.**