

**BIOL 215**

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**Sample Questions Regarding Scientific Notation, Sizes of Microbes, and Conversions**

1. What is 4,650,000,000 nm, in scientific notation?
  - a.  $4.65 \times 10^{-9}$  nm
  - b.  $4.65 \times 10^9$  nm
  - c.  $46.5 \times 10^8$  nm
  - d.  $4.65 \times 10^8$  nm
  
2. How many nm are in 51  $\mu\text{m}$ ?
  - a. 51000 nm
  - b. 510 nm
  - c. 5100 nm
  - d. 0.051 nm
  
3. How many mm long is a virus that is 36 nm?
  - a. 36,000,000 mm
  - b. 0.036 mm
  - c. 0.000036 mm
  - d. 0.0000036 mm
  
4. Which of the following is a virus-sized particle?
  - a.  $2.75 \times 10^{-9}$  mm
  - b.  $7.61 \times 10^{-3}$  mm
  - c.  $8.23 \times 10^{-2}$   $\mu\text{m}$
  - d.  $4.86 \times 10^{-6}$   $\mu\text{m}$
  
5. What type of microbe is  $8.1 \times 10^3$  nm long?
  - a. fungus
  - b. bacteria
  - c. helminth
  - d. virus

**Answers: 1 = b, 2 = a, 3 = c, 4 = c, 5 = b**