**CHEM 102 Recitation Ch 12 and 21 Name**

**Q1**. A semiconductor made from silicon (Si) and doped with a small amount of boron (B). This means:

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| A) | p-type semiconductor C) n-p type semiconductor |
| B) | n-type semiconductor D) diode-type semiconductor |

**Q2.** Which of the following materials is not used to manufacture artificial joints for the human body?

|  |  |
| --- | --- |
| A) | Ceramics-based materials. C) Titanium-based alloys. |
| B) | Polymeric materials such as polyethylene. D) Fullerenes. |

**Q3.** Which of the following statements is NOT correct?

A) Doping (Si) with (Sb) produces a semiconductor of the n-type.

B) The smectic phase in a liquid crystal consists of ordered molecules in layers.

C) The hybridization of C atoms in a nanotube is sp3.

D) Combining (Zn) and (Sb) is not expected to produce a semiconductor.

**Q4.** A “greenhouse gas” must

|  |  |
| --- | --- |
| A) | be radioactive. |
| B) | transmit visible sunlight and absorb infrared radiation. |
| C) | have no net change in dipole moment when it vibrates. |
| D) | absorb both visible sunlight and infrared radiation. |

**Q5.** Which of the following gases is NOT a greenhouse gas?

**A)** CO2 **B)** CO **C)** Cl2 **D)** H2O

**Q6.** What is the wavelength of a photon needed to dissociate an O3 molecule into O2 and O? The bond energy in O3 is 107.2 kJ/mol. [1.12 x 103 nm]