BIOE 476: Tissue Engineering, Fall 2017

Quiz #5

1. (1/2 point) A polymer scaffold that exhibits a slow rate of hydrolysis and high rate of water diffusion is more likely to exhibit BULK EROSION compared to SURFACE EROSION (TRUE or FALSE).

   A. True
   B. False

Answer: A (True)

2. (1/2 point) Both PLGA and PEG polymer scaffolds degrade by hydrolysis (TRUE or FALSE).

   A. True
   B. False

Answer: B (False)

3. (1 point) Of the options below, which ranking of protein-surface interactions correctly ranks relative protein adsorption strength? (Circle ONE best answer; > value indicates more protein adsorption)

   A. Hydrophilic > Hydrophobic = Charge
   B. Hydrophilic > Hydrophobic > Charge
   C. Charge > Hydrophilic > Hydrophobic
   D. Hydrophobic > Charge > Hydrophilic
   E. Hydrophilic = Charge > Hydrophobic

Answer: D
4. (1 point) A MakerBot, which utilizes extrusion of melted material, is a commercial example of what type of fabrication technology? (Circle ONE best answer)

A. Selective laser sintering  
B. Binder printing  
C. Stereolithography  
D. Surface chemistry patterning  
E. Fused deposition modeling

Answer: E