Name:

Medical Physics 710 / BME 710 **Due: Nov. 15th, 2018**

Journal Discussion 9: Hagmann et al, 2006: Understanding Diffusion MR Imaging Techniques: From Scalar Diffusion-weighted Imaging to Diffusion Tensor Imaging and Beyond

Name:

Due: Nov 15th at the beginning of class. Please turn in by hand, email, or submission to Learn@UW.

Question 1: 1. Explain the difference between molecular displacement, diffusion, and flux. (3 points)

Question 2: What factors determine the *b* value used for diffusion weighting? (2 points)

Question 3: What is an advantage and disadvantage of using a longer diffusion time interval? (2 points)

Question 4: True or False. (3 points)

a. Areas of high diffusion will lead to high signal intensity in a diffusion-weighted image.
b. To obtain an image of ADC values, two acquisitions are necessary.
c. Diffusion tensor imaging requires a minimum of 6 acquisitions.