QUIZ on Lecture P1_Wk5_L2

1. A VEDA simulation of approach and retract curves using the JKR model to describe the contact mechanics should typically show

   a) an asymmetric approach and retract curve  
   b) a symmetric approach and retract curve  
   c) an approach curve with no jump to contact  
   d) a retract curve with no tip snap-off from the substrate

2. A VEDA simulation of an approach curve using the DMT model to describe the contact mechanics should typically show a jump to contact event. In general, the location of the jump to contact event will NOT depend on

   a) the tip radius  
   b) the length of the cantilever  
   c) Young’s modulus of the tip  
   d) the thickness of the cantilever

3. The Hertz model might be selected to describe the interaction between a tip and a substrate when

   a) only the tip has a high modulus of elasticity  
   b) only the substrate has a high modulus of elasticity  
   c) both the tip and substrate have a high modulus of elasticity  
   d) the cantilever has a large spring constant

4. Using VEDA, capillary effects between a tip and a substrate

   a) cannot be simulated  
   b) can be simulated  
   c) can be simulated, but only if the substrate is hard  
   d) can be simulated, but only if the substrate is soft