QUIZ on Lecture P1_Wk2_L3

1. The surface energy of a solid should
   a) be independent of the Hamaker constant
   b) depend linearly on the Hamaker constant
   c) depend on the square of the Hamaker constant
   d) depend inversely on the Hamaker constant

2. The interaction energy between two flat planes separated by a distance d varies as
   a) $d^{-4}$
   b) $d^{-3}$
   c) $d^{-2}$
   d) $d^{-1}$

3. The Derjaguin approximation connects the force between a plane and a sphere to the interaction potential energy between two flat planes. This approximation may be of limited use because
   a) it requires a knowledge of the sphere radius
   b) it assumes an atomically flat plane
   c) it assumes an atomically smooth sphere
   d) the interaction between sphere and plane is limited to only van der Waals interactions
   e) all of the above