Name: _____
Final Exam, STS201: Section 84405, Tahan, 05/13/2005

1.) Define nanotechnology (as best you can in a paragraph).

2.) Give three examples of realistic nanotechnology applications.

a.

b.

c.

3.) Give three examples of new phenomena or properties of nanoparticles. For each, explain why they only occur in the nanoscale.

a.

b.

c.

4.) What are the three most important questions that need to be asked about the topic of the societal implications of nanotechnology?

a.

b.

c.

5.) What is a "normal" accident as introduced by Charles Perrow?

6.) Define the three terms David Noble introduces in his treatise on the military and technological development in the US.

a. ***Performance:***

b. ***Command:***

c. ***Modern Methods:***

7.) In each of the above cases that you defined, how are military requirements different from civilian needs (or are they)?

a.

b.

c.

8.) In the introduction, Cross and Szostak (CS) talk briefly about what a revolution is. How do they define it?

9.) What is the primary explanation CS give as to why Britain was the first country in the world to industrialize?

10.) What are some supporting, but disregarded, reasons? (List 3.)

11.) You are hired as a consultant for the West Wing as an expert on science policy. (After all, Brad Whitford (Josh) is originally from Madison.) The writers are cooking up a discussion between President Bartlett and his science advisor. A bill is coming through congress for regulating nanotechnology, and the president must decide to support it or not.

In two paragraphs summarize the current state-of-knowledge on the *environmental* impacts of nanotechnology. What is toxic and what isn't? What research has been done on toxicology? What's out in the environment now or will be soon? What about these nanobot grey goo scenarios? How should regulation be handled?