# Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# CSE 262: Technology, Ethics, and Global Society

# Fall 2014 Quiz 5 - 10/02

**1. (2 pts)**  Advancements in software engineering stem from what four improvements in the industry?

1. *Better education and training of software engineers, programmers, and analysts;*
2. *more sophisticated testing procedures;*
3. *better maintenance;*
4. *refocusing the software development process on the prevention of bugs rather than the detection and correction of bugs.*

**2. (1.5 pts)**  What are the major tasks of the software development process?

*requirements; specification and design; implementation*

**3. (1.5 pts)** What is frequently regarded as the most important aspect of software development (also considered to be the basis of “Brooks’ Law”)? (1/2 pt) What is “Brooks’ Law? (1 pt)

*Communication*

*“Adding people to a late project makes it later.”*

**4. (2 pts)** What are the three criteria (1/2 pt each) that professor Douglas Birsch says must be met for a person to bear moral responsibility? With what case was Douglas Birsch associated ( 1/2 pt)?

1. *The person’s actions must have caused the harm, or been a significant causal factor;*
2. *the person must have intended or willed the harm, or it must be a result of his or her negligence, carelessness or recklessness;*
3. *the person must be able to have known, or must know the consequences of the action, or must have deliberately remained ignorant of them.*

*Therac-25*

**5. (1 pt)** Who is Edward Tufte and why is he an opponent of Microsoft PowerPoint?

*½ pt Edward Tufte is a noted statistician, artist, graphic designer, and computer scientist.*

*½ pt He believes that the cultural effect of PowerPoint presentations weaken both verbal and spatial reasoning.*

**6. (1 pt)** What is the difference between a worm and a virus? ½ pt each definition.

***Worm is a***  *program that makes copies of itself and propagates those copies through a network to infect other computers.****Virus is*** *similar to a worm, but it resides in another program. That program must execute in order for the virus to propagate itself*

7. (1 pt) Who is David Parnas and with what safety critical software was he associated?

*½ pt David L. Parnas is a leading software engineer*

*who was asked to evaluate the programs*

*for a nuclear shutdown software system.1/2 pt*