SE3910 Review Questions (part 2 of 2)

1. In Gunfire at Sea, Morrison describes the Navy as going through three phases in the change management process. What are these three phases?
2. List and describe three key components of network centric warfare?
3. How has technology made network centric operations possible?
4. What is the nature of the relationship between military tactics and technology?
5. Does a new technology necessarily give the holder a military advantage?
6. Compare and contrast technology development during wartime and peacetime.
7. How fast can the military adopt new technologies and what can be done to facilitate the adoption of new technologies?
8. Define risk.
9. Why does diversification reduce risk in a portfolio?
10. In R&D portfolio management, aside from seeking to maximize portfolio value while managing risk, what other objectives are there?
11. What are two criteria to consider when deciding whether the DoD should lead, initiate, participate, or monitor a technology R&D project?
12. How does the Navy (the Office of Naval Research) categorize technology?
13. What does it mean to say a R&D project is aligned with the Army’s strategy?
14. Define technology transition.
15. What are challenges of transition technology to military operations?
16. What is a motivation for using an evolutionary acquisition process?
17. Explain how does system modularity accommodate technology evolution?
18. What are reasons for exponential growth in technology performance?
19. What are reasons a technology will converge to a small number of variants as it matures?
20. What aspects of technology are predictable and what aspects are not?
21. Ray Kurzweil argues for exponential growth in all technologies, not just semiconductors. What about his viewpoint seems reasonable, what seems unreasonable?
22. What is Augustine’s Law?
23. What is the difference between forecasting evolutionary technologies and disruptive technologies? What is a disruptive technology?
24. What is the technology readiness level? What does a value of 1 imply compared to a value of 9?
25. How is the technology readiness level used by the DoD?