1. Middleware is:
   1. A software layer that provides a programming abstraction as well as masking the heterogeneity of the underlying networks
   2. Program code that can be transferred from one computer to another and run at the destination
   3. A virtual version of a device or resource where the framework divides the resource into one or more execution environments
   4. A general term for the deliver of hosted services over the internet
   5. None of the above

Answer: A

1. Which of the following is NOT true:
   1. Open systems are characterized by the fact that their key interfaces are published
   2. Open distributed systems are based on the provision of a uniform communication mechanism and published interfaces for access to shared resources
   3. Open systems can be achieved without the specification and documentation of the key software interfaces of the components of a system
   4. Open distribute systems can be constructed from heterogenous hardware and software

Answer: C

1. What are the three components of security for information resources:
   1. Protection against disclosure to unauthorized individuals
   2. Protection against alteration or corruption
   3. Protection against interference with the means to access the resources
   4. None of the above
   5. A and B
   6. B and C
   7. E and C

Answer G

1. Which of the following about the challenges of scalability is TRUE:
   1. It is impossible to scale systems
   2. When scaling you do not need to worry about performance loss
   3. There are practically unlimited software resources
   4. When scaling systems you must also worry about the physical resources

Answer: D

1. What are some examples of dealing with failures (select all that apply):
   1. Reporting failures
   2. Tolerating failures
   3. Recovering from failures
   4. Pushing failures to the side
   5. Redundancy

Answer: B,C,E