

## EECE 417 Winter Term 2 – Sample Multiple Choice Questions

For each of the following questions, please choose the choice that best matched the answer. Only one of the four choices is correct.

1. Which of the following design decisions would NOT normally be part of the software system's architecture ?
  - a. Data processing, storage and visualization can occur in parallel
  - b. Use of event notifications for inter-component communication
  - c. Use of replicated modules to ensure the system's dependability
  - d. Use of agile programming practices to build the system
2. Which of the following statements best describes software architecture ?
  - a. It is a set of decisions about the software system
  - b. It is a set of principal decisions about the software system's design
  - c. It is a set of principal decisions about the software system's implementation
  - d. It is a set of principal decisions about the software systems' usability
3. Which of the following statements is true about REST and the n-tier architecture
  - a. Both REST and n-tier are patterns
  - b. REST is a pattern, while n-tier is a style
  - c. REST is a style, while n-tier is a pattern
  - d. Both REST and n-tier are styles
4. Which of the following phases of software development does NOT incorporate software architecture
  - a. Requirements gathering
  - b. Software implementation
  - c. Software testing
  - d. None of the above
5. Architectural drift is the process of allowing
  - a. The design to deviate from the system's requirements
  - b. The implementation to deviate from the system's requirements
  - c. The implementation to deviate from the system's design
  - d. All of the above
6. Which of the following *best* characterizes an architectural view ?
  - a. It describes the snapshot of a system's architecture at a given point in time
  - b. It incorporates a subset of decisions corresponding to a cross-cutting concern

- c. It is a visual representation of the architectural features corresponding to the system's structure
  - d. It is a mapping from the requirements to the system's design
- 7. Which of the following activities is not a part of the typical software development cycle ?
  - a. Recovering a software system's architecture from its implementation
  - b. Mapping non-functional requirements to the architecture
  - c. Translating high-level design decisions to implementation artifacts
  - d. Analyzing a software architecture for conformance to functional and non-functional properties
- 8. Which of the following is NOT a valid reason for using Software Product Lines (SPLs) ?
  - a. They simplify the software development task
  - b. They reduce development time and cost
  - c. They eliminate the need to build software connectors
  - d. They improve the software system's reliability
- 9. Which of the following best captures the software architect's role ?
  - a. Translate the customer's requirements to working code
  - b. Ensure that the software product meets its functional requirements
  - c. Motivate the development team and enforce deadlines
  - d. Maintain the foundational design of the software product
- 10. The main problem with limiting software architecture to Object Oriented Design (OOD) is
  - a. It limits the creativity of the software architect
  - b. It does not take into account the vast body of non OO code
  - c. It is too closely tied to the features of existing OOD languages
  - d. It makes the software design brittle and non-extensible
- 11. Which of the following statements is NOT correct regarding the requirements specification?
  - a. It must not contain any reference to the software architecture
  - b. It must specify both functional and non-functional properties
  - c. It evolves over the development cycle
  - d. It cannot contain any requirements that are not compatible with the software architecture
- 12. Which of the following is NOT a required ability for a software architect ?
  - a. Ability to write robust and fast code
  - b. Ability to see the forest for the trees
  - c. Ability to reconcile different stakeholder requirements

- d. Ability to talk to customers and understand their needs

13. Which of the following is NOT an example of a software connector ?

- a. Procedure call
- b. Shared memory
- c. Network socket
- d. Software router

14. Which of the following is an architectural pattern rather than a style ?

- a. Pipes and filters
- b. Model-view-controller
- c. Blackboard
- d. Virtual Machines

15. Which of the following statements best captures the relationship between Domain Specific Software Architectures (DSSAs) and architectural styles ?

- a. DSSAs have narrower scope, but encapsulate deeper knowledge
- b. DSSAs have narrower scope, but encapsulate shallower knowledge
- c. DSSAs have broader scope, but encapsulate shallower knowledge
- d. DSSAs have broader scope, but encapsulate deeper knowledge