

1. Which of the following best describes software architecture?

1 point

- ☐ It describes how the application should be coded.
- ☒ It represents the earliest design decisions.
- ☐ The choice of technology stack drives the software architecture.
- ☐ It captures implementation details.

2. Which of the following are artifacts that result from designing the software architecture?

1 point

- ☐ Software requirements specification (SRS)
- ☐ Test cases
- ☐ Administrator user guide
- ☒ UML diagrams

3. Components in a well-structured design should be \_\_\_\_\_.

1 point

- ☒ tightly cohesive
- ☐ tightly coupled
- ☐ loosely constrained
- ☐ loosely cohesive

4. Which of the following is an advantage of using UML diagrams when designing software architecture?

1 point

- ☐ They describe which parameters should be passed when instantiating an object.
- ☐ They explain which methods should be included when coding an object.
- ☒ They serve to bring new team members up to speed quickly.
- ☐ They all use JavaScript.

5. Which of the following best describes encapsulation?

1 point

- ☒ Bundling data and methods to hide an internal state, so a component's specific implementation is not exposed.
- ☐ A component should be easily replaced with another component.
- ☐ Designing a component so it operates in different environments.
- ☐ A component's design so it doesn't have dependencies on other components.

6. Which of the following best describes a service?

1 point

- ☐ It is a type of object.
- ☒ A unit of functionality that focuses on a solution to a business need, is deployed independently, and is reused by multiple systems.
- ☐ A service defines, composes, and implements loosely coupled independent components so they work together to create an application.
- ☐ A focus on the decomposition of a design into logical components.

7. Which statement is true regarding a 2-tier architecture?

1 point

- ☒ The interface resides on client machines and makes requests to a server for data or services.
- ☐ The two different tiers are the application tier and the data tier.
- ☐ A 2-tier architecture consists of a decentralized network of nodes that are both clients and servers.
- ☐ A 2-tier architecture consists of producers and consumers of events.

8. Which of the following architecture patterns are mutually exclusive?

1 point

- ☐ Three-tier and microservices
- ☐ Microservices and event-driven
- ☐ Peer-to-peer and event-driven
- ☒ Peer-to-peer and two-tier

9. Which of the following environments is intended for developers to use while they are actively coding the application?

1 point

- ☒ Development
- ☐ QA
- ☐ Staging
- ☐ Production

10. Which of the following is a security device that monitors traffic between an internal and an external network?

1 point

- ☐ Load balancer
- ☒ Firewall
- ☐ Web server
- ☐ Router