Started on	Sunday, 3 November 2024, 9:42 PM
State	Finished
Completed on	Sunday, 3 November 2024, 9:50 PM
Time taken	8 mins 11 secs
Marks	23.00/25.00
Grade	**4.60** out of 5.00 (**92**%)

Question **1**

Correct

Mark 1.00 out of 1.00

What is the primary purpose of the map-reduce pattern?

- ○ a.   To optimize memory usage in small-scale systems
- ○ b.   To provide a user-friendly interface for big data systems
- ○ c.   To store large datasets in a distributed manner
- ◉ d.   To perform distributed sorting and analysis of data ✓

The correct answer is: To perform distributed sorting and analysis of data

Question **2**

Correct

Mark 1.00 out of 1.00

What is a significant benefit of the Microkernel pattern?

- ○ a.   It guarantees high performance under all conditions
- ◉ b.   It separates policy and mechanism for flexibility ✓
- ○ c.   It eliminates the need for external communication protocols
- ○ d.   It increases the system's design complexity

The correct answer is: It separates policy and mechanism for flexibility

Question **3**

Correct

Mark 1.00 out of 1.00

Question 11: What is the primary goal of the Architecture Tradeoff Analysis Method (ATAM)?

- ⚪ a.   To avoid tradeoffs
- 🔘 b.   To focus on the most important concerns of stakeholders ✔
- ⚪ c.   To analyze all aspects of an architecture
- ⚪ d.   To follow a waterfall approach

The correct answer is: To focus on the most important concerns of stakeholders

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Question **4**

Correct

Mark 1.00 out of 1.00

What technique can be used to handle the situation where frequently used data needs to be accessed quickly?

- 🔘 a.   Client-side caching ✔
- ⚪ b.   Asynchronous communication
- ⚪ c.   Data layer techniques
- ⚪ d.   Session management

The correct answer is: Client-side caching

Question **5**

Correct

Mark 1.00 out of 1.00

The Logical View's notation example is associated with:

- ⚪ a.   UML
- 🔘 b.   Philippe Kruchten, Rational Software Corp. ✔
- ⚪ c.   Harvinder S Jabbal
- ⚪ d.   Rational Rose

The correct answer is: Philippe Kruchten, Rational Software Corp.

Question **6**

Correct

Mark 1.00 out of 1.00

HS0110 The ability to reason about and manage change in a software system is primarily influenced by:

- ○ a.   Coding practices
- ○ b.   Project management
- ○ c.   Testing strategies
- ◉ d.   Software architecture ✔

The correct answer is: Software architecture

Question **7**

Correct

Mark 1.00 out of 1.00

In the Blackboard architecture, how are hypotheses managed during problem-solving?

- ◉ a.   They are removed once rejected. ✔
- ○ b.   They are categorized by difficulty.
- ○ c.   They are never altered once created.
- ○ d.   They remain permanently on the blackboard.

The correct answer is: They are removed once rejected.

Question **8**

Correct

Mark 1.00 out of 1.00

What is a primary benefit of layered architecture?

- ◉ a.   Reusable lower layer components ✔
- ○ b.   Complex integration of components
- ○ c.   Increased coupling between layers
- ○ d.   No separation of concerns

The correct answer is: Reusable lower layer components

Question **9**

Correct

Mark 1.00 out of 1.00

J0752 What work product of architecture design can be used to prioritize test cases?

- ○ a.   Sequence diagrams
- ◉ b.   Utility tree ✔
- ○ c.   Class diagrams
- ○ d.   Use case diagrams

The correct answer is: Utility tree

Question **10**

Correct

Mark 1.00 out of 1.00

What is the primary objective of using the Architecture Tradeoff Analysis Method (ATAM)?

- ○ a.   To develop detailed design documents
- ○ b.   To finalize software design
- ○ c.   To write code and test functionality
- ◉ d.   To evaluate architectural trade-offs and quality attributes ✔

The correct answer is: To evaluate architectural trade-offs and quality attributes

Question **11**

Correct

Mark 1.00 out of 1.00

What is a major benefit of the pipe-and-filter pattern?

- ○ a.   It ensures that filters never change during execution
- ◉ b.   It allows for components to execute in parallel ✔
- ○ c.   It eliminates the need for data transformation
- ○ d.   It ensures tight coupling between components

The correct answer is: It allows for components to execute in parallel

Question **12**

Correct

Mark 1.00 out of 1.00

How are map-reduce instances expected to communicate with each other?

- ○ a.   Direct data sharing between map functions
- ○ b.   Using intermediary communication tiers
- ○ c.   Through shared memory buffers
- ● d.   Via <key, value> pairs emitted from map instances ✓

The correct answer is: Via <key, value> pairs emitted from map instances

Question **13**

Correct

Mark 1.00 out of 1.00

According to the document, what is a key issue with maintaining architecture?

- ○ a.   Overlapping views
- ● b.   Inconsistency problem ✓
- ○ c.   Excessive documentation
- ○ d.   Lack of stakeholder involvement

The correct answer is: Inconsistency problem

Question **14**

Correct

Mark 1.00 out of 1.00

According to Gartner, what should infrastructure leaders focus on before deploying cloud computing?

- ● a.   Completing service definitions and linking them to business outcomes ✓
- ○ b.   Outsourcing all IT operations to third-party providers
- ○ c.   Buying new hardware for cloud operations
- ○ d.   Implementing public cloud services only

The correct answer is: Completing service definitions and linking them to business outcomes

Question **15**

Incorrect

Mark 0.00 out of 1.00

What is the purpose of using disposable resources in the cloud?

- ◉ a.   To replace manual resource management ✗
- ○ b.   To ensure resources are fixed permanently
- ○ c.   To build complex fixed servers
- ○ d.   To automate scaling processes

The correct answer is: To automate scaling processes

Question **16**

Correct

Mark 1.00 out of 1.00

What does partitioning a multi-tenant application help achieve?

- ○ a.   Elimination of elasticity
- ○ b.   Reduced availability
- ◉ c.   Increased data isolation ✓
- ○ d.   Single-layer architecture

The correct answer is: Increased data isolation

Question **17**

Correct

Mark 1.00 out of 1.00

What is a key architectural pattern mentioned in the Microsoft Application Architecture Guide?

- ○ a.   Centralized manual servers
- ◉ b.   Multi-tier applications ✓
- ○ c.   Single-layer deployment
- ○ d.   Simplistic monolith design

The correct answer is: Multi-tier applications

Question **18**

Correct

Mark 1.00 out of 1.00

What do component-and-connector structures help to answer?

- ○ a. What is the assignment of software elements to development teams
- ○ b. What modules are related to other modules
- ○ c. What the primary functional responsibility of each module is
- ◉ d. What are the major executing components and how they interact ✓

The correct answer is: What are the major executing components and how they interact

Question **19**

Correct

Mark 1.00 out of 1.00

J0773 How can architecture aid in testing modules that interact with external systems?

- ○ a. By automating all external system tests
- ○ b. By reducing the scope of external system testing
- ○ c. By simplifying the code structure
- ◉ d. By identifying which external systems need testing ✓

The correct answer is: By identifying which external systems need testing

Question **20**

Correct

Mark 1.00 out of 1.00

J0787 During the architecture analysis phase, what is one of the possible restrictions that could be validated?

- ○ a. Components should not communicate with external systems
- ◉ b. Database access should only be through specific components ✓
- ○ c. Objects can call other objects in any layer
- ○ d. The user interface must conform to design standards

The correct answer is: Database access should only be through specific components

Question **21**

Correct

Mark 1.00 out of 1.00

Which of the following is a principle of software architecture?

- ○ a.   Reducing crosscutting concerns
- ◉ b.   Ensuring key quality attributes ✔
- ○ c.   Ignoring architectural patterns
- ○ d.   Hard-coding components

The correct answer is: Ensuring key quality attributes

Question **22**

Incorrect

Mark 0.00 out of 1.00

How is user interaction typically achieved in modern interactive systems? A. Command-line interfaces

- ◉ a.   Graphical user interfaces ✘
- ○ b.   Remote procedures
- ○ c.   Text-based input only

The correct answer is: Remote procedures

Question **23**

Correct

Mark 1.00 out of 1.00

What is the primary role of a hypervisor in virtualization?

- ○ a.   It provides a distributed file system for the cloud.
- ◉ b.   It creates and manages virtual machines. ✔
- ○ c.   It manages physical memory allocation among virtual machines.
- ○ d.   It allows multiple applications to share the same operating system.

The correct answer is: It creates and manages virtual machines.

Question **24**

Correct

Mark 1.00 out of 1.00

J0721 In the layered architecture, how should code indicate its layer?

○ a.   By including comments specifying the layer ✔

○ b.   By using different variable names

○ c.   By using different programming languages

○ d.   By avoiding use of the database

The correct answer is: By including comments specifying the layer

Question **25**

Correct

Mark 1.00 out of 1.00

What does the "control component" do in the Blackboard architecture?

○ a.   Acts as a user interface.

○ b.   Executes all knowledge sources simultaneously.

○ c.   Monitors changes on the blackboard and schedules knowledge source evaluations. ✔

○ d.   Stores all data permanently.

The correct answer is: Monitors changes on the blackboard and schedules knowledge source evaluations.

◄ Quiz 2

Jump to...   ⇕

Quiz 3 (CS11) ►