Started on	Sunday, 27 October 2024, 7:37 PM
State	Finished
Completed on	Sunday, 27 October 2024, 7:47 PM
Time taken	9 mins 27 secs
Marks	22.00/25.00
Grade	**4.40** out of 5.00 (**88**%)

Question **1**

Correct

Mark 1.00 out of 1.00

20. In a Broker architecture, what is the role of URLs?

○ a.   To authenticate users

○ b.   To store data on the server

○ c.   To define server capabilities

◉ d.   To locate services and route requests ✓

The correct answer is: To locate services and route requests

Question **2**

Correct

Mark 1.00 out of 1.00

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

○ a.   To write code and test functionality

◉ b.   To evaluate architectural trade-offs and quality attributes ✓

○ c.   To finalize software design

○ d.   To develop detailed design documents

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

Question **3**

Correct

Mark 1.00 out of 1.00

J0774 Why is it important for architecture to support the ability to replace components during testing?

- ⦿ a.   To ensure that external dependencies do not disrupt testing ✓
- ○ b.   To allow for faster system development
- ○ c.   To eliminate all integration tests
- ○ d.   To increase system complexity

The correct answer is: To ensure that external dependencies do not disrupt testing

Question **4**

Correct

Mark 1.00 out of 1.00

In the Layers pattern, how must the usage among layers be structured?

- ⦿ a.   Unidirectional ✓
- ○ b.   Circular
- ○ c.   Bidirectional
- ○ d.   Random

The correct answer is: Unidirectional

Question **5**

Correct

Mark 1.00 out of 1.00

J0799 What is the role of an expert in the view fusion phase of architecture reconstruction?

- ○ a.   To design the system's interface
- ○ b.   To program new components
- ○ c.   To test system performance
- ⦿ d.   To group elements into layers ✓

The correct answer is: To group elements into layers

Question **6**

Correct

Mark 1.00 out of 1.00

What is the primary purpose of the Pipes and Filters pattern?

- ○ a.   To structure data processing in a system ✓
- ○ b.   To manage user input
- ○ c.   To handle security concerns
- ○ d.   To optimize database queries

The correct answer is: To structure data processing in a system

Question **7**

Incorrect

Mark 0.00 out of 1.00

Which component of the MVC pattern handles user input? A. Model

- ○ a.   Controller ✗
- ○ b.   User Interface
- ○ c.   View

The correct answer is: User Interface

Question **8**

Incorrect

Mark 0.00 out of 1.00

Which programming language introduced the MVC pattern? A. Java

- ○ a.   Smalltalk ✗
- ○ b.   C++
- ○ c.   Python

The correct answer is: Python

Question **9**

Correct

Mark 1.00 out of 1.00

What does an application façade do in the business layer?

- ○ a. Hides internal modules from clients ✔
- ○ b. Validates user input
- ○ c. Caches frequently accessed data
- ○ d. Manages database connections

The correct answer is: Hides internal modules from clients

Question **10**

Correct

Mark 1.00 out of 1.00

Which technique helps in mapping objects to database tables?

- ○ a. Asynchronous communication
- ○ b. Client-side caching
- ○ c. Facade pattern
- ○ d. Object-Relational Mapping ✔

The correct answer is: Object-Relational Mapping

Question **11**

Correct

Mark 1.00 out of 1.00

How do patterns provide a common vocabulary?

- ○ a. By offering technical jargon
- ○ b. By removing lengthy descriptions ✔
- ○ c. By limiting communication
- ○ d. By enforcing strict coding standards

The correct answer is: By removing lengthy descriptions

Question **12**

Correct

Mark 1.00 out of 1.00

J0797 Which of the following information is gathered in architecture reconstruction to identify reusable components?

- ○ a.   Database schemas
- ○ b.   User preferences and behavior
- ◉ c.   Classes, files, and global data used by objects ✓
- ○ d.   Performance test results

The correct answer is: Classes, files, and global data used by objects

Question **13**

Incorrect

Mark 0.00 out of 1.00

Which participant in the ATAM captures raw scenarios and resolutions in electronic form?

- ○ a.   Proceedings Scribe
- ○ b.   Team Leader
- ○ c.   Evaluation Leader
- ◉ d.   Scenario Scribe ✗

The correct answer is: Proceedings Scribe

Question **14**

Correct

Mark 1.00 out of 1.00

Which technique allows updating parts of a web page without reloading the entire page?

- ○ a.   Responsive design
- ◉ b.   Asynchronous communication ✓
- ○ c.   Server-side caching
- ○ d.   Client-side caching

The correct answer is: Asynchronous communication

Question **15**

Correct

Mark 1.00 out of 1.00

J0765 What does an integration test plan focus on, according to architectural guidance?

- ○ a.   The user interface experience
- ◉ b.   Module interactions and dependencies ✔
- ○ c.   The scalability of the system
- ○ d.   The performance of individual code blocks

The correct answer is: Module interactions and dependencies

Question **16**

Correct

Mark 1.00 out of 1.00

In the Pipes and Filters pattern, what does a "filter" do?

- ○ a.   It stores data temporarily.
- ○ b.   It connects two databases.
- ◉ c.   It transforms data read on its input port(s). ✔
- ○ d.   It serves as a data source.

The correct answer is: It transforms data read on its input port(s).

Question **17**

Correct

Mark 1.00 out of 1.00

J0772 Why is the ability to replace components such as external systems or simulators useful in testing?

- ○ a.   It increases the speed of system deployment.
- ○ b.   It minimizes architectural changes.
- ○ c.   It reduces the cost of actual component testing.
- ◉ d.   It allows the system to be tested without needing real external dependencies. ✔

The correct answer is: It allows the system to be tested without needing real external dependencies.

Question **18**

Correct

Mark 1.00 out of 1.00

J0719 What is the recommended way to notify multiple modules in an architecture?

- ○ a.   Use direct database calls
- ● b.   Use publish-subscribe pattern ✔
- ○ c.   Use synchronous method calls
- ○ d.   Notify them one by one

The correct answer is: Use publish-subscribe pattern

Question **19**

Correct

Mark 1.00 out of 1.00

In the context of the Pipes and Filters pattern, what is a potential drawback of using intermediate files?

- ○ a.   They enhance data flow.
- ● b.   They can clutter directories and introduce errors. ✔
- ○ c.   They are essential for data transformation.
- ○ d.   They simplify data management.

The correct answer is: They can clutter directories and introduce errors.

Question **20**

Correct

Mark 1.00 out of 1.00

J0714 What should be done when changes to code make parts of the architecture document obsolete?

- ○ a.   Re-write the entire document
- ○ b.   Ignore the outdated parts
- ○ c.   Delete the document
- ● d.   Mark the outdated sections as 'No longer applicable' ✔

The correct answer is: Mark the outdated sections as 'No longer applicable'

Question **21**

Correct

Mark 1.00 out of 1.00

J0717 Which of the following should be done to maintain code and architecture consistency?

- a.   Regularly update the architecture documentation ✔
- b.   Add new code without review
- c.   Skip architecture reviews for small changes
- d.   Use different programming languages for each layer

The correct answer is: Regularly update the architecture documentation

Question **22**

Correct

Mark 1.00 out of 1.00

10. How does the Broker pattern improve application flexibility?

- a.   By requiring all services to be static
- b.   By allowing dynamic changes to services at runtime ✔
- c.   By enforcing a single programming language
- d.   By limiting service access to a single client

The correct answer is: By allowing dynamic changes to services at runtime

Question **23**

Correct

Mark 1.00 out of 1.00

J0794 The 'Vanish' system was used as a case study for which process?

- a.   Architecture reconstruction ✔
- b.   System migration
- c.   Performance testing
- d.   Database management

The correct answer is: Architecture reconstruction

Question **24**

Correct

Mark 1.00 out of 1.00

What is a common challenge associated with the MVC pattern in modern applications? A. Difficulty in managing user input

- ◉ a. Complexity of graphical representations ✔
- ○ b. Inefficiency in data access
- ○ c. Simplicity in design

The correct answer is: Complexity of graphical representations

Question **25**

Correct

Mark 1.00 out of 1.00

Which ATAM participant is responsible for writing scenarios during the elicitation phase?

- ◉ a. Scenario Scribe ✔
- ○ b. Evaluation Leader
- ○ c. Proceedings Scribe
- ○ d. Questioner

The correct answer is: Scenario Scribe

◄ Quiz 1

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Quiz 3 (CS10) ►