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Started on	Sunday, 20 October 2024, 3:50 PM
State	Finished
Completed on	Sunday, 20 October 2024, 3:55 PM
Time taken	4 mins 25 secs
Marks	9.00/10.00
Grade	4.50 out of 5.00 (90%)

Question 1

Correct

Mark 1.00 out of 1.00

What does an ESB (Enterprise Service Bus) do in SOA?

- ☐ a. Stores data for long-term use
- ☒ b. Routes and transforms messages between services ✓
- ☐ c. Implements user authentication mechanisms
- ☐ d. Coordinates workflow orchestration

The correct answer is: Routes and transforms messages between services

Question 2

Correct

Mark 1.00 out of 1.00

What does a filter do in the pipe-and-filter pattern?

- ☐ a. It compresses data to reduce memory usage
- ☐ b. It stores data locally for future processing
- ☐ c. It ensures security by encrypting data
- ☒ d. It transforms input data and sends it to the next filter ✓

The correct answer is: It transforms input data and sends it to the next filter

Question **3**

Incorrect

Mark 0.00 out of 1.00

Which pattern uses unidirectional data flow among components?

- ☐ a. Broker Pattern
- ☐ b. Client-Server Pattern
- ☒ c. Pipe-and-Filter Pattern ✗
- ☐ d. Layered Pattern

The correct answer is: Layered Pattern

Question **4**

Correct

Mark 1.00 out of 1.00

What problem does the broker pattern address?

- ☐ a. How to improve system performance through caching
- ☐ b. How to encrypt data during transmission
- ☐ c. How to store large data streams in-memory
- ☒ d. How to connect users to service providers without knowing their location ✓

The correct answer is: How to connect users to service providers without knowing their location

Question **5**

Correct

Mark 1.00 out of 1.00

Which of the following is an intermediary component in SOA?

- ☒ a. ESB (Enterprise Service Bus) ✓
- ☐ b. SOAP connector
- ☐ c. View
- ☐ d. Model

The correct answer is: ESB (Enterprise Service Bus)

Question **6**

Correct

Mark 1.00 out of 1.00

What is one reason to use MVC for building software?

- ☐ a. To improve network latency
- ☐ b. To enforce communication protocols
- ☒ c. To separate concerns between user interface and application logic ✓
- ☐ d. To ensure strict coupling between components

The correct answer is: To separate concerns between user interface and application logic

Question **7**

Correct

Mark 1.00 out of 1.00

What is the context where the broker pattern is most useful?

- ☐ a. In small, non-networked applications
- ☐ b. In systems with a single, monolithic application
- ☐ c. In systems focused on data transformation pipelines
- ☒ d. In distributed systems with multiple independent services ✓

The correct answer is: In distributed systems with multiple independent services

Question **8**

Correct

Mark 1.00 out of 1.00

What is an intermediary that manages communication between servers and brokers?

- ☐ a. Layer manager
- ☒ b. Server-side proxy ✓
- ☐ c. Filter
- ☐ d. Pipe

The correct answer is: Server-side proxy

Question **9**

Correct

Mark 1.00 out of 1.00

What type of communication is typically associated with a REST connector?

- ☐ a. Encrypted service discovery
- ☐ b. Binary data streaming
- ☒ c. Request/reply over HTTP ✓
- ☐ d. Asynchronous messaging

The correct answer is: Request/reply over HTTP

Question **10**

Correct

Mark 1.00 out of 1.00

In SOA, what is the purpose of a service provider?

- ☐ a. To transform views into models
- ☐ b. To store runtime data in memory
- ☒ c. To provide services through published interfaces ✓
- ☐ d. To discover and invoke other services

The correct answer is: To provide services through published interfaces

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