INTEGRATION FISRT 4 LEC

1. What is the primary goal of Enterprise Integration?

A. To replace all legacy systems with new software

B. To ensure that all systems within an organization work together seamlessly

C. To reduce the number of employees in an organization

D. To outsource IT operations to third-party vendors

2. Which integration pattern involves directly connecting two systems?

A. Hub-and-Spoke

B. ESB

C. Point-to-Point

D. Microservices

3. Which of the following is a challenge associated with enterprise integration?

A. Elimination of data redundancy by default

B. Enhanced system security without additional effort

C. Scalability concerns as the organization grows

4. Which integration pattern is characterized by using a centralized bus to manage communication, transformation, and routing?

A. ESB

B. Point-to-Point

C. Microservices

5. Data silos improve the efficiency of data sharing and integration within an organization.

False

6. Scalability is not a concern in enterprise integration since modern systems are inherently

scalable.

False

7. In Hub-and-Spoke Integration, the central hub can become a single point of failure, which is a potential risk.

True

8. Enterprise Integration primarily aims to reduce the number of software applications within an organization.

False

1. Which of the following is the first step in the data integration process?

a) Data Transformation

b) Data Loading

c) Data Extraction

d) Data Aggregation

2. What is the primary advantage of using Data Virtualization in data integration?

a) Better data quality

b) Real-time data access

c) Simplified data transformation

d) Easier batch processing

3. What does the 'E' in ETL stand for?

a) Evaluate

b) Extract

c) Enhance

d) Execute

4. In the context of data integration, what does the term 'Data Federation' refer to?

a) Combining data from multiple sources into a single physical database.

b) Providing a unified interface to query data from multiple sources without physically moving the data.

c) Summarizing data into reports.

d) Aggregating data from various departments for analysis.

5. Which of the following best describes 'Data Synchronization'?

a) Combining data from multiple sources into one view.

b) Ensuring data across multiple systems is consistent and up-to-date.

c) Extracting data from various sources for integration.

d) Transforming data into a standardized format.

True or False Questions:

1. ELT is a variation of ETL where data is first transformed and then loaded into the target system.

False

2. Low-Code/No-Code Data Integration tools are designed to be used primarily by technical users.

False

3. In Data Integration, 'Data Aggregation' refers to summarizing or combining data from multiple sources.

True

4. One advantage of ETL is that it supports real-time data integration.

False

6. Which of the following best describes a message in the context of messaging systems?

a) A set of commands to be executed by a system

b) A structured piece of data exchanged between systems

c) A log entry in a database

d) A visual representation of a system's workflow

7. In messaging systems, what is the main advantage of using asynchronous messaging?

a) It requires less programming effort

b) It reduces the cost of network hardware

c) It decouples systems, allowing them to operate independently

d) It ensures that messages are never lost

8. What is a 'message channel' in the context of messaging systems?

a) A medium for transmitting messages between two systems

b) A storage location for archived messages

c) A graphical user interface for composing messages

d) A software tool for monitoring system performance

9. What type of messaging channel ensures that only one consumer receives and processes each message?

a) Publish-Subscribe Channel

b) Point-to-Point Channel

c) Message Queue

d) Dead Letter Channel

10. Which messaging channel is best suited for broadcasting the same message to multiple consumers?

a) Publish-Subscribe Channel

b) Point-to-Point Channel

c) Message Queue

d) Dead Letter Channel

True or False Questions:

1. Messaging patterns are only useful for systems that operate in real-time.

False

2. One of the goals of messaging patterns is to minimize the dependency between different systems.

True

3. In a messaging system, the sender and receiver of a message must always be active at the same time.

False

4. Message channels can be used to connect multiple systems, allowing for the broadcast of messages to multiple receivers.

True

5. The introduction of messaging patterns in an enterprise environment typically increases the tight coupling between system components.

False

11. An API is considered RESTful if it has which of the following features?

a) Stateful

b) Stateless

c) Cacheless

d) Client-server

12. Which of the following make up the query portion of a RESTful request?

a) API Server

b) Resources

c) Key

d) Format

e) Parameters