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Exam : CTFL-PT_D

**Title : ISTQB Certified Tester
Foundation Level -
Specialist Performance
Testing**

Version : DEMO

1.What is the benefit of transaction nesting for performance testing?

- A. The possibility to measure the evolution of response time with the load.
- B. The ability to measure individual and aggregate activities.
- C. The possibility to measure the time elapsed for the transaction.
- D. The ability to measure reflection time to better represent when a real user performs an action.

Answer: B

Explanation:

Transaction nesting allows performance testers to measure both individual activities within a transaction and the aggregate performance of the entire transaction. This is beneficial because it helps identify specific areas where performance issues may be occurring. By understanding both the granular and overall performance, testers can better pinpoint bottlenecks and optimize the system. This aligns with the ISTQB principles of comprehensive performance measurement and analysis to ensure system reliability and efficiency.

2.Select the option that identifies the possible causes of the degradation of a system's response over time during dynamic performance testing.

- 1. Disk fragmentation.
 - 2. Network latency.
 - 3. File repository growth.
 - 4. Memory leaks.
 - 5. Inadequate database design.
- A. True options: I, III, IV.
 - B. True options: II, III, IV.
 - C. True options: II, III, V.
 - D. True options: I, II, IV.

Answer: A

Explanation:

- Disk fragmentation (I) can lead to slower data retrieval times as the disk has to work harder to read fragmented files.
- File repository growth (III) increases the amount of data that must be managed and retrieved, which can slow down response times.
- Memory leaks (IV) gradually consume available memory, leading to slower system performance as the available memory for processing tasks decreases.

Network latency (II) and inadequate database design (V) are also potential causes of performance degradation, but in this context, options I, III, and IV are the most directly related to the gradual degradation of response times over time. This understanding is supported by common performance testing practices outlined in ISTQB materials.

3.Scenario

James is participating in a project in which a web portal is being developed to sell tickets for different types of events.

Once the sale has been made and confirmed by the payment channel, the information must be available to the rest of the types of user (for example, the managers of each event) in a maximum time of 2 seconds (It is expected that this temporal constraint will be met in 95% of the transactions and that 90%

of the transactions will be completed at 100%).

Ticket sales take place during a time window (start date and time, end date and time) that is announced in advance. At the beginning of this window, there are peaks of 150 users per minute, for 5 minutes.

Question Choose the option that enables James to meet the performance target.

- A. Establish the acceptance criteria for response times.
- B. Create a baseline corresponding to the total number of users registered in the production database.
- C. There is no need to set a baseline for the peak attendance, it is a known value.
- D. Create a baseline for maximum attendance for the ticketing transaction.

Answer: D

Explanation:

Creating a baseline for maximum attendance helps ensure that the system can handle peak loads. This baseline acts as a reference point for performance testing, allowing James to simulate and measure the system's behavior under expected peak conditions. By doing this, he can verify that the system meets the performance target of handling 150 users per minute within the specified time constraints.

Establishing such baselines is a fundamental practice in performance testing, as emphasized by the ISTQB guidelines.

4.Choose the ONE option that describes the example of a transaction. The scenario for this question is the transfer of an amount of money from one bank account to another.

- A. Request transfer of X Monetary Units from account K to account P; reduce the balance of account K by X Monetary Units; Increase the balance of account P by X Monetary Units. If the reduction and Increase have been correctly applied, then apply changes.
- B. Request transfer of X Monetary Units from account K to account P; increase the balance of account P by X Monetary Units. If the increase in account P has been correctly applied, then apply changes.
- C. Request transfer of X Monetary Units from account K to account P; decrease the balance of account K by X Monetary Units. If the reduction in account K has been correctly applied, then apply changes.
- D. Request transfer of X Monetary Units from account K to account P; reduce the balance of account K by X Monetary Units; increase the balance of account P by X Monetary Units. If the reduction or increase has been correctly applied, then apply changes

Answer: D

Explanation:

A transaction in performance testing involves a series of actions that need to be completed to ensure data consistency and correctness. Option D captures the complete and atomic nature of a transaction by ensuring that both the reduction in account K and the increase in account P are correctly applied before committing the changes. This reflects the principles of ACID (Atomicity, Consistency, Isolation, Durability) in database transactions, which are crucial for ensuring reliability and correctness in financial operations as covered in ISTQB performance testing standards.

5.Identify the correspondences between performance measures and metrics (1 -6) and the different environments (A C) in which performance evaluation is needed.

- 1. Alerts and warnings.
- 2. Concurrency of usage.
- 3. Operational processes.
- 4. Resource utilization.

- 5. Response time.
- 6. Throughput of data, transactions, and other units of work performed.
- 1. Operating environment.
- 2. Business environment.
- 3. Technical environment.
- A. 1A-2C-3C-4A-5C-6B.
- B. 1B-2B-3A-4B-5C-6A.
- C. 1A-2B-3A-4C-5C-6B.
- D. 1A-2B-3C-4C-5A-6C.

Answer: C

Explanation:

- 1A: Alerts and warnings are typically part of the operating environment to monitor and respond to issues in real-time.
- 2B: Concurrency of usage is critical in the business environment where multiple users interact with the system simultaneously.
- 3A: Operational processes are key aspects of the operating environment, ensuring the smooth running of day-to-day activities.
- 4C: Resource utilization is a technical concern, focusing on how effectively system resources are used.
- 5C: Response time is a technical metric that directly affects user experience and system efficiency.
- 6B: Throughput of data, transactions, and other units of work performed is relevant to the business environment where the volume of operations impacts overall performance.

This categorization aligns with the ISTQB framework for performance evaluation across different environments, ensuring comprehensive coverage of performance metrics.