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## Q&A

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**Exam** : **CTFL-PT**

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

**Version** : DEMO

1. You have been asked to test the performance of a software and system update to a North American mobile trivia quiz game application. The quiz app is available on major app stores serving English-speaking users. The number of concurrent users planned for is 5 million. Winning quiz participants are promised a share of an allocated cash prize. Once participants start playing, their quiz sessions must not be lost especially if all previous questions were answered correctly. The application owner wants to ensure that 99% of quiz sessions are maintained (up to 495 million sessions) until the last answer has been successfully recorded.

An essential operational profile you identified is the quiz participant. Your operational profile discovery efforts have yielded a number of profile attributes. A quiz participant will answer twelve questions if they manage to answer the first eleven correctly. Every user is made aware of a new question nearly simultaneously. The quiz user has limited time to respond using a mobile application. They are unable to respond to subsequent questions after they incorrectly answer a question. However, the quiz participant continues to see new questions even though they may have responded incorrectly to a previous question. If they manage to answer all twelve questions correctly, the quiz application notifies them that they have tentatively won (subject to formal verification) an equal share of a cash prize of an amount set for the particular quiz event. In addition to this individualized interaction, a broadcast video stream is presented in the quiz app providing entertaining commentary, quiz event coordination, event status and answer explanations.

The average quiz event duration when measured from when the first question is presented to the last answer is reviewed is fifteen minutes. Over the fifteen minutes, twelve questions are presented to quiz participants.

After making the following assumptions:

1. Questions must be responded to within a four second window;
2. Question responses will be sent evenly across this window of time (resulting in an average responder time of two seconds);
3. The designed maximum number of concurrent users will attempt the first question;
4. There will be no functional issues when handling the load.
5. The average time from response reception to database commitment is 1000 milliseconds under maximum concurrent usage.

What is the approximate maximum average system throughput if that assumptions hold?

- A. 1.667 million transactions/second
- B. 1 million transactions/second
- C. 1 million transactions/millisecond
- D. 200,000 transactions/second

**Answer: B**

2. Which section of a performance test script is typically responsible for ensuring the script will have the right values and communication settings during execution?

- A. main section
- B. clean-up section
- C. initialization section
- D. timer section

**Answer: B**

3. You have been asked to test the performance of a software and system update to a North American mobile trivia quiz game application. The quiz app is available on major app stores serving English-speaking users. The number of concurrent users planned for is 5 million. Winning quiz participants are promised a share of an allocated cash prize. Once participants start playing, their quiz sessions must not be lost especially if all previous questions were answered correctly. The application owner wants to ensure that 99% of quiz sessions are maintained (up to 4.95 million sessions) until the last answer has been successfully recorded.

In order to avoid cooperation among quiz participants, the answers to the multiple choice questions are listed randomly. Confidence in the game's fairness requires that a registered user originate from only one quiz client device. Every user must respond over the same short window of time in order to avoid external assistance and learning the official answer before responding. Only participants who respond correctly may answer the next question. Any activity that appears to violate expected behavior of a rule-following participant will cause the client session to be rejected.

You are developing test script code that handles quiz question responses. To do this you need to ensure that the script emulates the production quiz app client's logic in terms of rule following and client-backend interface specification.

Based on the question description provided, which is one test script behavior you would implement in order to ensure the test script successfully delivers the operational and load profile of a quiz participant?

- A. Recognize whether the previous question response was correct
- B. Set the device identifier as a constant to ensure all virtual user instances use the set value
- C. Randomly select the maximum think time limit used to delay question responses.
- D. Use the date-time clock in order to submit question responses on a synchronized schedule with each instance

**Answer: B**

4. During design discussions the performance test team observed that database stored procedures for several popular use cases may be badly coded.

Which of the following common performance failures would best confirm the team's concern was justified?

- A. Slow response under all load levels
- B. Slow response under moderate-to-heavy load levels
- C. Degraded response over time
- D. Inadequate or graceless error handling under heavy or over-limit load

**Answer: B**

5. Which of the following performance tests commonly results in understanding an application's ability to support future increases of users or larger amounts of data without exceeding the current performance requirement?

- A. scalability test
- B. load test
- C. endurance test
- D. concurrency test

**Answer: C**