

# Pass Guaranteed Efficient ISTQB - CT-AI - Questions Certified Tester AI Testing Exam Exam



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After taking a bird's eye view of applicants' issues, Exam4Docs has decided to provide them with the Real CT-AI Questions. These Certified Tester AI Testing Exam (CT-AI) dumps pdf is according to the new and updated syllabus so they can prepare for ISTQB certification anywhere, anytime, with ease. A team of professionals has made the product of Exam4Docs after much hard work with their complete potential so the candidates can prepare for ISTQB practice test in a short time.

## ISTQB CT-AI Exam Syllabus Topics:

Topic	Details
Topic 1	<ul style="list-style-type: none"><li>Introduction to AI: This exam section covers topics such as the AI effect and how it influences the definition of AI. It covers how to distinguish between narrow AI, general AI, and super AI; moreover, the topics covered include describing how standards apply to AI-based systems.</li></ul>
Topic 2	<ul style="list-style-type: none"><li>ML: Data: This section of the exam covers explaining the activities and challenges related to data preparation. It also covers how to test datasets create an ML model and recognize how poor data quality can cause problems with the resultant ML model.</li></ul>
Topic 3	<ul style="list-style-type: none"><li>Machine Learning ML: This section includes the classification and regression as part of supervised learning, explaining the factors involved in the selection of ML algorithms, and demonstrating underfitting and overfitting.</li></ul>
Topic 4	<ul style="list-style-type: none"><li>Using AI for Testing: In this section, the exam topics cover categorizing the AI technologies used in software testing.</li></ul>

Topic 5	<ul style="list-style-type: none"> <li>Quality Characteristics for AI-Based Systems: This section covers topics covered how to explain the importance of flexibility and adaptability as characteristics of AI-based systems and describes the vitality of managing evolution for AI-based systems. It also covers how to recall the characteristics that make it difficult to use AI-based systems in safety-related applications.</li> </ul>
Topic 6	<ul style="list-style-type: none"> <li>Neural Networks and Testing: This section of the exam covers defining the structure and function of a neural network including a DNN and the different coverage measures for neural networks.</li> </ul>
Topic 7	<ul style="list-style-type: none"> <li>ML Functional Performance Metrics: In this section, the topics covered include how to calculate the ML functional performance metrics from a given set of confusion matrices.</li> </ul>
Topic 8	<ul style="list-style-type: none"> <li>Test Environments for AI-Based Systems: This section is about factors that differentiate the test environments for AI-based</li> </ul>
Topic 9	<ul style="list-style-type: none"> <li>systems from those required for conventional systems.</li> </ul>
Topic 10	<ul style="list-style-type: none"> <li>Testing AI-Specific Quality Characteristics: In this section, the topics covered are about the challenges in testing created by the self-learning of AI-based systems.</li> </ul>
Topic 11	<ul style="list-style-type: none"> <li>Methods and Techniques for the Testing of AI-Based Systems: In this section, the focus is on explaining how the testing of ML systems can help prevent adversarial attacks and data poisoning.</li> </ul>

>> Questions CT-AI Exam <<

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## ISTQB Certified Tester AI Testing Exam Sample Questions (Q120-Q125):

### NEW QUESTION # 120

A neural network has been designed and created to assist day-traders improve efficiency when buying and selling commodities in a rapidly changing market. Suppose the test team executes a test on the neural network where each neuron is examined. For this network, the shortest path indicates a "buy" and it will only occur when the one-day predicted value of the commodity is greater than the spot price by 0.75%. The neurons are stimulated by entering commodity prices and testers verify that they activate only when the future value exceeds the spot price by at least 0.75%.

Which of the following statements BEST explains the type of coverage being tested on the neural network?

- A. Threshold coverage
- B. Neuron coverage
- C. Sign-change coverage
- D. Value-change coverage

**Answer: A**

Explanation:

The syllabus details that threshold coverage requires each neuron to achieve an activation value greater than a specified threshold: "Threshold coverage: Full threshold coverage requires that each neuron in the neural network achieves an activation value greater than a specified threshold." (Reference: ISTQB CT-AI Syllabus v1.0, Section 6.2, page 48 of 99)

### NEW QUESTION # 121

Which ONE of the following is the BEST option to optimize the regression test selection and prevent the regression suite from growing large?

#### SELECT ONE OPTION

- A. Using of a random subset of tests.
- B. Identifying suitable tests by looking at the complexity of the test cases.
- C. Automating test scripts using AI-based test automation tools.
- D. **Using an AI-based tool to optimize the regression test suite by analyzing past test results**

#### Answer: D

Explanation:

A . Identifying suitable tests by looking at the complexity of the test cases.

While complexity analysis can help in selecting important test cases, it does not directly address the issue of optimizing the entire regression suite effectively.

B . Using a random subset of tests.

Randomly selecting test cases may miss critical tests and does not ensure an optimized regression suite. This approach lacks a systematic method for ensuring comprehensive coverage.

C . Automating test scripts using AI-based test automation tools.

Automation helps in running tests efficiently but does not inherently optimize the selection of tests to prevent the suite from growing too large.

D . Using an AI-based tool to optimize the regression test suite by analyzing past test results.

This is the most effective approach as AI-based tools can analyze historical test data, identify patterns, and prioritize tests that are more likely to catch defects based on past results. This method ensures an optimized and manageable regression test suite by focusing on the most impactful test cases.

Therefore, the correct answer is D because using an AI-based tool to analyze past test results is the best option to optimize regression test selection and manage the size of the regression suite effectively.

#### NEW QUESTION # 122

Which statement regarding the use of training, validation, and test data sets is correct?

Choose ONE option (1 out of 4)

- A. Optimally, the data should be distributed equally between the training, validation, and test data sets.
- B. If limited data is available, it may be better to work without a separate test data set.
- C. **The data in the test data set must be equivalent to the data in the training data sets and to the data in the validation data sets.**
- D. If only limited data is available, validation and test data sets can be combined in multiple ways during training.

#### Answer: C

Explanation:

The ISTQB CT-AI syllabus (Section3.2 - Model Evaluation) specifies the correct usage of training, validation, and test datasets. It emphasizes that the test dataset must be representative of the real operational data and must be equivalent in distribution to the training and validation sets, ensuring a fair and unbiased evaluation. Option D precisely matches this requirement.

Option A contradicts the syllabus because validation and test sets serve different purposes: validation is for tuning, test is for final evaluation. Combining them undermines the reliability of results. Option B is incorrect because even with limited data, the syllabus recommends maintaining a test set or using techniques such as cross-validation rather than eliminating testing. Option C is wrong because equal distribution (33/33/33) is not recommended; typically, the training set is much larger (e.g., 70-80%).

Thus, Option D is the only statement aligned with the syllabus' guidance.

#### NEW QUESTION # 123

Which ONE of the following statements correctly describes the importance of flexibility for AI systems?

SELECT ONE OPTION

- A. Self-learning systems are expected to deal with new situations without explicitly having to program for it.
- B. AI systems are inherently flexible.
- C. AI systems require changing of operational environments; therefore, flexibility is required.
- D. **Flexible AI systems allow for easier modification of the system as a whole.**

#### Answer: D

#### Explanation:

Flexibility in AI systems is crucial for various reasons, particularly because it allows for easier modification and adaptation of the system as a whole.

\* AI systems are inherently flexible (A): This statement is not correct. While some AI systems may be designed to be flexible, they are not inherently flexible by nature. Flexibility depends on the system's design and implementation.

\* AI systems require changing operational environments; therefore, flexibility is required (B):

While it's true that AI systems may need to operate in changing environments, this statement does not directly address the importance of flexibility for the modification of the system.

\* Flexible AI systems allow for easier modification of the system as a whole (C): This statement correctly describes the importance of flexibility. Being able to modify AI systems easily is critical for their maintenance, adaptation to new requirements, and improvement.

\* Self-learning systems are expected to deal with new situations without explicitly having to program for it (D): This statement relates to the adaptability of self-learning systems rather than their overall flexibility for modification.

Hence, the correct answer is C. Flexible AI systems allow for easier modification of the system as a whole.

#### References:

\* ISTQB CT-AI Syllabus Section 2.1 on Flexibility and Adaptability discusses the importance of flexibility in AI systems and how it enables easier modification and adaptability to new situations.

\* Sample Exam Questions document, Question #30 highlights the importance of flexibility in AI systems.

### NEW QUESTION # 124

Which ONE of the following options BEST DESCRIBES clustering?

SELECT ONE OPTION

- A. Clustering requires you to know the classes.
- B. Clustering is done without prior knowledge of output classes.
- C. Clustering is supervised learning.
- D. Clustering is classification of a continuous quantity.

#### Answer: B

#### Explanation:

Clustering is a type of machine learning technique used to group similar data points into clusters. It is a key concept in unsupervised learning, where the algorithm tries to find patterns or groupings in data without prior knowledge of output classes. Let's analyze each option:

A . Clustering is classification of a continuous quantity.

This is incorrect. Classification typically involves discrete categories, whereas clustering involves grouping similar data points.

Classification of continuous quantities is generally referred to as regression.

B . Clustering is supervised learning.

This is incorrect. Clustering is an unsupervised learning technique because it does not rely on labeled data.

C . Clustering is done without prior knowledge of output classes.

This is correct. In clustering, the algorithm groups data points into clusters without any prior knowledge of the classes. It discovers the inherent structure in the data.

D . Clustering requires you to know the classes.

This is incorrect. Clustering does not require prior knowledge of classes. Instead, it aims to identify and form the classes or groups based on the data itself.

Therefore, the correct answer is C because clustering is an unsupervised learning technique done without prior knowledge of output classes.

### NEW QUESTION # 125

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