

TM3 Fragen & Antworten & TM3 Studienführer & TM3 Prüfungsvorbereitung

26.11.22

TM3 Hörsaalübung

Aufgabe 2.41
 Zwei Kugeln gleicher Masse $m_1 = m_2$ stoßen zusammen.
 Ermitteln Sie die Geschwindigkeit nach dem Stoß, wenn der Stoßvorgang

a) elastisch
 b) plastisch
 c) teilelastisch ($e = 0,5$)

verläuft.
 Um welchen Betrag ändert sich jeweils die kinetische Energie?

Impulserhaltung: $m v_1 + m v_2 = m \bar{v}_1 + m \bar{v}_2$
 $v_1 + v_2 = \bar{v}_1 + \bar{v}_2 \quad (1)$

Stoßbedingung: $e = -\frac{\bar{v}_1 - \bar{v}_2}{v_1 - v_2}$
 $e = -\frac{\bar{v}_1 - \bar{v}_2}{2 \frac{m}{s}} \Rightarrow 2 \frac{m}{s} \cdot e + \bar{v}_1 = \bar{v}_2 \quad (2)$

in (1): $3 \frac{m}{s} + 1 \frac{m}{s} = \bar{v}_1 + 2 \frac{m}{s} e + \bar{v}_1$
 $\Rightarrow \bar{v}_1 = (2-e) \frac{m}{s}$
 $\bar{v}_2 = (2+e) \frac{m}{s}$

$\Delta E_{kin} = \bar{E}_k - E_k = \frac{1}{2} m (\bar{v}_1^2 + \bar{v}_2^2 - v_1^2 - v_2^2)$
 $= \frac{1}{2} m ((2-e)^2 + (2+e)^2 - 3^2 - 1^2) \frac{m^2}{s^2}$
 $= m (e^2 - 1) \frac{m^2}{s^2}$

BONUS!!! Laden Sie die vollständige Version der Fast2test TM3 Prüfungsfragen kostenlos herunter:
<https://drive.google.com/open?id=16d8kcFUSM524qFk28tWC3e2fZvQRaE0g>

Fast2test genießt schon guten Ruf auf dem IT-Prüfungssoftware Markt Deutschlands, Japans und Südkoreas. Wenn es für Sie das erste Mal, unsere Marke zu hören, können Sie zuerst auf unserer Webseite die Demos der BCS TM3 gratis probieren. Dann können Sie das kundenorientierte Design von uns Fast2test erkennen und die ausführliche Deutungen empfinden. Wenn auch die Unterlagen der BCS TM3 schon am neuesten sind, werden wir immer weiter die Aktualisierungssituation überprüfen. Innerhalb einem Jahr nach Ihrem Kauf, bieten wir Ihnen gratis immer weiter die neueste Version von BCS TM3 Prüfungssoftware.

Die BCS TM3 Zertifizierungsprüfung stellt eine wichtige Position in der IT-Branche dar, wörtüber viele IT-Experten sich einig sind. Die BCS TM3 (ISTQB Certified Tester Advanced Level - Test Management v3.0) Zertifizierungsprüfung zu bestehen ist jedoch nicht einfach. Es erfordert umfangreiche Fachkenntnisse und Erfahrungen, weil die BCS TM3 Zertifizierungsprüfung sowieso eine autoritäre Prüfung, die das Niveau der IT-Fachkenntnissen überprüft. Wenn Sie das BCS TM3 Zertifikat bekommen, wird Ihre Fähigkeit von den Firmen akzeptiert. Das bedeutet, dass die zielgerichteten Schulungsunterlagen von Fast2test sehr wirksam ist. Mit unseren Prüfungsmaterialien können Sie 100% die Prüfung bestehen.

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Wenn Sie unsere Lernmaterialien zur BCS TM3 Zertifizierungsprüfung benutzen wollen, werden sicher die Zeit und Wirtschaftskosten reduziert. Vorm Kauf unserer BCS TM3 Prüfungsfrage können Sie kostenlos unsere Fragen herunterladen. Sie sind in der Form von PDF und Software. Wenn Sie die Softwareversion brauchen, bitte setzen Sie sich in Verbindung mit unserem Kundenservice.

BCS TM3 Prüfungsplan:

Thema	Einzelheiten
Thema 1	<ul style="list-style-type: none"> Managing the Team: This section addresses the role of Test Leads in analyzing team needs, identifying required skills, and coordinating efforts using a whole-team approach. Candidates are expected to understand how to align team capabilities with project goals and ensure effective collaboration. The syllabus highlights techniques for team management, resource allocation, and fostering continuous improvement through retrospectives and knowledge sharing to optimize testing performance.
Thema 2	<ul style="list-style-type: none"> Managing the Product: This section emphasizes understanding and managing the product under test, focusing on controlling and assessing testing activities. It covers test metrics, reporting, and defect management across sequential, Agile, and hybrid environments. Candidates should be able to select and apply appropriate test estimation techniques and establish defect workflows suited to the project context. The syllabus also includes preparing business cases for testing activities that justify costs, benefits, and the value of testing within the overall project.
Thema 3	<ul style="list-style-type: none"> Managing the Test Activities: This section focuses on the role of Test Managers and how testing is planned, monitored, controlled, and completed across different software development contexts. It covers the overall test process, including defining test plans, tracking progress, and ensuring proper closure. Candidates are expected to understand how testing fits within various lifecycle models, test levels, and types, while engaging stakeholders effectively. The syllabus emphasizes risk-based testing to identify quality risks, assess impacts, and select suitable mitigation activities. It also highlights formulating project-level test strategies, selecting appropriate test approaches, setting measurable objectives, and improving processes through models like IDEAL. Additionally, candidates should be able to evaluate and introduce test tools based on business needs, risks, and return on investment.

BCS ISTQB Certified Tester Advanced Level - Test Management v3.0 TM3 Prüfungsfragen mit Lösungen (Q28-Q33):

28. Frage

You are a test manager developing a master test plan. As part of the master test plan, you are defining exit criteria for the various test levels.

Which of the following exit criteria would be most appropriate and SMART for component testing, and which one would be most appropriate and SMART for system testing?

- i. 95% of the tests prepared are executed successfully
- ii. All test cases have been run
- iii. 80% decision coverage for all tests run
- iv. At least 30 defects have been found
- v. At least two weeks of test execution
- vi. No more open defects

- A. v for component testing, vi for system testing
- **B. iii for component testing, i for system testing**
- C. ii for component testing, iv for system testing
- D. iii for component testing, v for system testing

Antwort: B

Begründung:

Comprehensive and Detailed Explanation From Exact Extract of ISTQB Certified Tester Advanced Level - Test Manager v3.0 syllabus:

The syllabus emphasizes SMART exit criteria tailored to the test level:

For component testing, structural coverage metrics (e.g., decision coverage) are appropriate and measurable at code level, making iii

(80% decision coverage) suitable and SMART.

References: ISTQB CTAL-TM v3.0 Syllabus-Chapter 3 (Test Planning: defining level-appropriate and measurable entry/exit criteria; use of structural coverage for lower levels and outcome/behavior criteria for higher levels).

29. Frage

You are currently leading an independent test team. Based on the information given in the scenario, identify how the team could be improved most effectively.

- A. By providing training in the payroll domain
- B. By providing a workshop on test design techniques
- C. By providing specific training on the systems being tested
- D. By providing training on reviewing requirements

Antwort: A

Begründung:

Comprehensive and Detailed Explanation From Exact Extract of ISTQB Certified Tester Advanced Level - Test Manager v3.0 syllabus:

According to the ISTQB Certified Tester Advanced Level - Test Manager v3.0 Syllabus (Chapter 7: People Skills - Team Composition), team performance can be significantly improved by ensuring that testers possess an appropriate mix of domain knowledge, technical skills, and interpersonal skills.

"An effective test team requires a balance between technical knowledge, testing skills, and knowledge of the business domain."

(ISTQB CTAL-TM v3.0 Syllabus, Chapter 7 - People Skills, Section: Test Team Dynamics and Skill Development) When a team lacks understanding of the business domain, such as payroll in this scenario, they may:

Struggle to interpret requirements or identify key risk areas.

Miss critical business logic defects.

Design test cases that fail to cover realistic user workflows.

Therefore, the most effective improvement would be training in the payroll domain- strengthening their domain expertise to enhance test design quality, communication with stakeholders, and defect detection effectiveness.

Why the Other Options Are Incorrect:

B). Workshop on test design techniques- Enhances technical testing skill but does not address lack of domain understanding.

C). Specific training on the systems being tested- Improves system familiarity but still lacks insight into business rules and domain-driven testing.

D). Training on reviewing requirements- Improves requirement analysis, but without domain knowledge, reviewers cannot effectively validate correctness or completeness.

References (from ISTQB Certified Tester Advanced Level - Test Manager v3.0 Syllabus):

Chapter 7: People Skills - Team Composition

Section: Test Team Dynamics and Skill Development

States that domain knowledge training is critical for tester effectiveness.

Emphasizes the need for balance among technical, testing, and business knowledge.

30. Frage

Analytical test improvement approaches identify problems based on data from the project or team.

Appropriate improvements can be derived from an analysis of the identified set of problems.

Which of the following is not an example of an analytical-based test process improvement approach?

- A. The Goal Question Metric (GQM) approach
- B. Root cause analysis
- C. Analysis using measures, metrics and indicators
- D. Quantitative TPI NEXT assessment

Antwort: D

Begründung:

Comprehensive and Detailed Explanation From Exact Extract of ISTQB Certified Tester Advanced Level - Test Manager v3.0 syllabus:

The syllabus classifies improvement approaches including analytical approaches (e.g., root cause analysis, GQM, and analysis of measures/metrics/indicators) that derive improvements by analysing project/team data.

Model-based approaches (e.g., TMMi, TPI NEXT) are a distinct category that evaluate practices against a reference model rather than

primarily deriving improvements from project data analysis.

Hence, B (Quantitative TPI NEXT assessment) is model-based, not an analytical approach; A, C, and D are analytical.

(References: CTAL-TM v3.0 Syllabus - Chapter 2 "Test Management in the Organization" - improvement approaches: analytical vs. model-based vs. other; examples provided for each category.)

31. Frage

Assume you are a test manager of a project that develops software in the medical domain. You are responsible for analysing the organisational test strategy and the project context to choose the appropriate test approach.

You consider the following factors:

Detailed requirements of high quality are available

Parts of the software to be developed are expected to be safety critical Internal audits and an external audit by a government agency are expected to take place, as such traceability and evidence are important elements for the test approach A release date has been defined, and a marketing campaign has already been scheduled The project works according to the sequential V-model lifecycle The independent test team has a lot of domain knowledge but has also been trained and has experience in using test design techniques

Which of the following test approaches would be most appropriate for this project?

- A. Experience-based testing, e.g., exploratory testing, to make maximum use of the domain knowledge of the testers
- **B. Risk-based testing to identify the most critical features and use a methodical approach to testing, e.g., more formal test design techniques to drive testing and ensure traceability**
- C. Use Acceptance Test-Driven Development (ATDD) as a way to implement shift-left, and use test automation in addition to enhance product quality
- D. Define acceptance criteria for each of the requirements and implement definition-of-done criteria to drive testing

Antwort: B

Begründung:

Comprehensive and Detailed Explanation From Exact Extract of ISTQB Certified Tester Advanced Level - Test Manager v3.0 syllabus:

In regulated, safety-critical domains with audits and strong traceability requirements, the syllabus emphasizes defining a methodical, documented test approach within test planning, including selection of formal test design techniques and risk-based testing to focus effort on the most critical features. These elements are explicitly tied to V-model contexts, where traceability from requirements through test conditions and cases is expected, and evidence is essential for internal and external audits (CTAL-TM v3.0 Syllabus - Chapter 3, Test Planning; and Chapter 4, Risk-Based Testing and effort allocation).

Option B aligns with these needs: applying risk-based testing to prioritize safety-critical functions and using formal techniques to produce traceable, auditable test assets.

Options A and D are practices typically associated with agile/ATDD and "definition of done," which do not best fit a sequential V-model context. Option C (experience-based) may complement but is insufficient as the primary approach where traceability and auditability are key.

(References: CTAL-TM v3.0 Syllabus - Chapter 3 "Test Planning, Monitoring, and Control" - defining the test approach and selecting test design techniques; Chapter 4 "Risk-Based Testing and Other Approaches for Test Prioritization and Effort Allocation" - prioritizing safety-critical areas; material on traceability/audit expectations in regulated contexts.)

32. Frage

Management is sceptical regarding the budget request (€25,000) for the next testing project. You are asked for a cost-benefit calculation. Based on historical data from several projects, you have come up with the following numbers:

Average prevention cost per defect: €200

Average cost of detection per defect: €400

Average cost of internal failure: €150

Average cost of external failure: €2,500

Expected number of defects to be found in this project during testing: 50 What is the result for the expected cost-benefit calculation for the upcoming project?

- A. €62,500
- B. €72,500
- **C. €87,500**
- D. €92,500

Antwort: C

