



TMMi® Professional Sample Paper B

Version 2.0

#SuccessWithTMMi

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This sample exam paper supports candidates preparing for the TMMi Professional certification examination based on the TMMi Professional Syllabus V2.3 [TMMiProf] and the TMMi Model Version 2.0 [TMMiV2.0]. The questions are representative of the format, style, and level of difficulty of the actual examination and cover all syllabus chapters. The sample paper is intended as a self-assessment tool to help candidates evaluate their readiness for the examination and become familiar with the types of questions that may be asked.

The second part of this document contains the correct answers and justifications for each question, providing additional guidance and supporting the learning process.

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Revisions

This section summarizes the key revisions between releases this document.

This section is provided for information only.

Release	Revision Notes
V1.0	Second full sample for new TMMi Professional syllabus (V2020), including questions for new section of the TMMi Professional syllabus “TMMi in an Agile context”.
V1.1	Incorrect answer keys for questions 38 and 40 updated.
V1.2	Update in the context of release TMMi Model R1.3 (2022) and TMMi Professional Syllabus 2.1 (2022).
V1.2a	Various editorial updates.
V1.3	Question 36 (including justification) updated to improve compliance with TAMAR. Learning objective for Question 32 corrected. Also in question 32 the process area number for Peer Reviews corrected.
V2.0	Fully updated for the new Professional syllabus (V2.3), which is the syllabus based on the TMMi model version 2.0. The following questions are new: 2, 4, 7, 8, 11, 28, 29, 30, 31, 32 and 40. All other questions have been largely or fully re-used.

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1 Sample Exam Paper

1.1 Introduction to the TMMi model

Learning Objective 1.1 “Provide examples of the typical business reasons for test improvement”

1. Which of the following is a typical business reason for starting a test improvement program?

Number of correct answers: **1**

- A) Implement risk-based testing
- B) Achieve a higher level of product reliability
- C) Increase market share
- D) Provide a career path for test professionals

Learning Objective 1.6 “Understand the People, Process and Technology (PPT) Framework and how this reflects on test automation and test process improvement”

2. An organization introduces a new test automation technology to improve its testing efficiency. However, the testers have limited knowledge of the technology and do not have the skills to maintain the automated tests.

According to the People, Process and Technology (PPT) Framework, what should the organization recognize?

Number of correct answers: **1**

- A) The technology will automatically improve the test process once it has been introduced.
- B) The organization should primarily invest in more advanced technology.
- C) The effectiveness of the technology depends also on having people with the appropriate knowledge and skills.
- D) The organization should postpone process improvement until the technology is fully implemented.

Learning Objective 1.3 “Summarize typical costs and benefits of the TMMi”

3. What is an example of an indirect benefit for a test improvement program?

Number of correct answers: **1**

- A) Improvement in staff motivation
- B) Shortened lead-time of test execution phase
- C) Higher levels of defect detection
- D) Improved (more reliable) test estimations

Learning Objective 1.5 “Describe the scope of the TMMi model, including the fact that TMMi is intended to be lifecycle independent”

4. Which statement BEST describes the scope of the TMMi model?

Number of correct answers: **1**

- A) TMMi is limited to testing activities in software development projects.
- B) TMMi provides a framework for improving test processes and can be applied regardless of the software development lifecycle used.
- C) TMMi is primarily a framework for selecting and implementing test automation tools.
- D) TMMi defines a specific test lifecycle that organizations should adopt.

1.2 TMMi Maturity Levels

Learning Objective 2.1 “Summarize the TMMi maturity levels and process areas”

5. Which of the following is a TMMi level 3 process area?

Number of correct answers: **1**

- A) Test Design and Execution
- B) Quality Control
- C) Non-Functional Testing
- D) Implementation and Habit

Learning Objective 2.1 “Summarize the TMMi maturity levels and process areas”

6. To which TMMi level do the process areas Test Organization and Test Training Program belong?

Number of correct answers: **1**

- A) TMMi level 2 Managed
- B) TMMi level 3 Defined
- C) TMMi level 4 Measured
- D) TMMi level 5 Optimization

Learning Objective 2.2 “Explain the TMMi maturity levels”

7. Study the following description:

“The test process is institutionalized across the organization. Shift-left is applied to testing, and test improvements also focus on non-functional quality characteristics.”

To which TMMi maturity level does this description apply?

Number of correct answers: **1**

- A) TMMi Level 1
- B) TMMi Level 2
- C) TMMi Level 3
- D) TMMi Level 4

Learning Objective 2.2 “Explain the TMMi maturity levels”

8. Study the following description:

“At this level there are no process areas and maturity goals with which to comply. Success in the organizations depends on the competence and heroics of the people working within them.”

To which TMMi maturity level does this description apply?

Number of correct answers: **1**

- A) TMMi Level 1
- B) TMMi Level 2
- C) TMMi Level 3
- D) TMMi Level 4

1.3 Structure of the TMMi

Learning Objective 3.2 “Explain the difference between a required, expected and informative component”

9. Which type of TMMi model component is described hereafter?

“The components guide those who implement improvements or perform assessments. Either the practices as described or acceptable alternatives to the practices must be present in the processes of the organization before goals can be considered satisfied.”

Number of correct answers: **1**

- A) Required components
- B) Expected components
- C) Informative components
- D) Alternative components

Learning Objective 3.3 “Categorize the components of the TMMi by type (required, expected, informative)”

10. Which of the following TMMi model components is a required component?

Number of correct answers: **1**

- A) Goal
- B) Practice
- C) Sub practice
- D) Purpose statement

Learning Objective 3.4 “Understand how TMMi covers institutionalization”

11. Institutionalization is an important concept in process improvement. At which TMMi level are the standard test processes expected to be fully institutionalized across the organization?

Number of correct answers: **1**

- A) TMMi Level 2
- B) TMMi Level 3
- C) TMMi Level 4
- D) TMMi Level 5

Learning Objective 3.5 “Summarize the relationship between TMMi and CMMI”

12. Which of the following statements BEST describes the relationship between the TMMi model and the CMMI version 2 practice area Verification and Validation?

Number of correct answers: **1**

- A) The CMMI practice area Verification and Validation is a supporting practice area for the testing processes within the TMMi.
- B) The CMMI practice area Verification and Validation is a practice area that should be addressed in parallel with the testing processes within the TMMi.
- C) The TMMi process areas provide support and a more detailed description of what is required to establish a defined Verification and Validation process.
- D) Fully achieved for the TMMi level 2 process areas Test Planning and Test Monitoring and Control also ensures implies full compliance to the requirements of CMMI practice area Verification and Validation.

1.4 TMMi model

Learning Objective 4.1 “Summarize the TMMi level 2 process areas and goals”

13. A test process assessment against TMMi levels 2 and 3 has been performed on an international outsourcing software organization. Although many practices, as required by the TMMi model, are already in place, projects suffer from poor test estimations.

Which of the following process areas would need specific attention to address the above-mentioned shortcoming?

Number of correct answers: **1**

- A) Test Techniques
- B) Test Planning
- C) Test Design and Execution
- D) Test Training Program

Learning Objective 4.2 “Recognize the practices of the TMMi Level 2 process areas”

14. An organization is facing too many defects occurring during production. As a consequence, an important test improvement goal for the next improvement cycle is to improve the quality (effectiveness) of the test cases.

Which of the following practices needs to be addressed, in the context of the improvement goal, as part of G1 “Perform Test Analysis and Design” of the Test Design and Execution process area?

Number of correct answers: **1**

- A) Implement test cases
- B) Specify smoke test
- C) Identify and prioritize test charters
- D) Identify and prioritize test conditions

Learning Objective 4.1 “Summarize the TMMi level 2 process areas and goals”

15. A test process assessment has been performed on an international multi-site software organization. Although many practices, as required by the TMMi model, are already in place, the organization is missing a clear direction and vision regarding test process improvement.

Which of the following process areas would need specific attention addressing the above-mentioned shortcoming?

Number of correct answers: **1**

- A) Test Policy and Strategy
- B) Test Planning
- C) Test Process Optimization
- D) Product Quality Evaluation

Learning Objective 4.2 “Recognize the practices of the TMMi Level 2 process areas”

16. A test organization is at the initial TMMi level and is trying to implement the TMMi level 2 process areas. One of the improvement goals for the current year is to improve management and control of test environments.

Which of the following practices needs to be addressed as part of G3 “Manage and Control Test Environments” of the Test Environment process area?

Number of correct answers: **1**

- A) Perform test environment smoke test
- B) Analyze test environment and generic test data requirements
- C) Create generic test data
- D) Coordinate the availability and usage of the test environments

Learning Objective 4.3 “Summarize the TMMi level 3 process areas and goals”

17. In a TMMi assessment, one of the shortcomings stated was the lack of professional testers. “Test functions and accompanying test career paths to be defined” is an improvement action recommended by the assessors.

Which TMMi process area addresses goals and practices for defining test functions and establishing test career paths?

Number of correct answers: **1**

- A) Test Training Program
- B) Test Policy and Strategy
- C) Test Organization
- D) Test Planning

Learning Objective 4.3 “Summarize the TMMi level 3 process areas and goals”

18. A test process assessment has been performed on a company developing systems for the medical industry. Their systems are classified as safety critical. One of the shortcomings identified during the assessment is related to reliability testing. Although reliability was identified by the business as a critical issue, no formal approach and test techniques are being applied for reliability testing.

Which of the following process areas would need specific attention to address the above-mentioned shortcoming?

Number of correct answers: **1**

- A) Test Design and Execution
- B) Test Environment
- C) Non-Functional Testing
- D) Product Quality Evaluation

Learning Objective 4.3 “Summarize the TMMi level 3 process areas and goals”

19. Which of the following is NOT a goal of the process area Test Organization?

Number of correct answers: **1**

- A) Provide Test Training
- B) Establish Test Functions for Test Specialists
- C) Determine, Plan and Implement Test Process Improvements
- D) Establish Test Career Paths

Learning Objective 4.4 “Recognize the practices of the TMMi level 3 process areas ”

20. Test Planning is defined as one of the process areas at TMMi level 2. It introduces practices such as product risk assessment and defining a test approach for the project. Process areas at higher TMMi levels build on these practices and also address product risk assessments and/or defining a test approach.

Which of the following TMMi level 3 process areas most strongly builds on the practices and experiences of Test Planning at TMMi level 2?

Number of correct answers: **1**

- A) Test Organization
- B) Test Process and Integration
- C) Non-Functional Testing
- D) Peer reviews

Learning Objective 4.5 “Summarize the TMMi level 4 process areas and goals”

21. Consider the following goal “Establish Quantitative Project Goals for Product Quality”.

To which of the following process areas does this goal belong?

Number of correct answers: **1**

- A) Test Measurement
- B) Product Quality Evaluation
- C) Peer Reviews
- D) Quality Control

Learning Objective 4.7 “Summarize the TMMi level 5 process areas and goals”

22. The three TMMi level 5 process areas, Defect Prevention, Quality Control and Test Process Optimization, all provide support for continuous process improvement.

Which of these process areas is specifically aimed at identifying new testing technologies that may be appropriate and to transition them into the organization?

Number of correct answers: **1**

- A) Defect Prevention
- B) Quality Control
- C) Test Process Optimization
- D) All three level 5 process areas specifically address new testing technologies.

Learning Objective 4.7 “Summarize the TMMi level 5 process areas and goals”

23. An organization already at TMMi level 4 is now trying to also achieve TMMi level 5 compliance.

Which of the following process areas is within the scope of this specific test improvement programme?

Number of correct answers: **1**

- A) Product Quality Evaluation
- B) Quality Control
- C) Peer Reviews
- D) Test Measurement

Learning Objective 4.8 “Recognize the practices of the TMMi level 5 process areas”

24. A test organization is at TMMi level 4 and is trying to implement the TMMi level 5 process areas. One of the improvement goals for the current year is to implement a Defect Prevention program.

Which of the following practices needs to be addressed as part of the Defect Prevention process area?

Number of correct answers: **1**

- A) Establish test process performance measures, part of the goal Establish a Statistically Controlled Test Process.
- B) Propose solutions to eliminate root causes, part of the goal Define Actions to Systematically Eliminate Root Causes of Defects.
- C) Pilot test process improvement proposals, part of the goal Select Test Process Improvements.
- D) Manage the deployment, part of the goal Implement and Deploy Test Improvements.

1.5 TMMi in Agile and DevOps context

Learning Objective 5.1 “Understand how TMMi can be used in an Agile context, and how the two can complement each other”

25. How does TMMi support test process improvement in an Agile context?

Number of correct answers: **1**

- A) By imposing a set of required testing practices to an Agile project.
- B) By using TMMi as a reminder of critical testing practices that are often not defined or forgotten in Agile development methodologies.
- C) By having a focus on defining lean test processes with an Agile mindset.
- D) By using only the test engineering related process areas, and omitting anything that is related to improving at an organizational level.

Learning Objective 5.2 “Understand the difference doing test process improvement in an Agile context compared to in a traditional context”

26. Which of the following statements is TRUE regarding test process improvement in an Agile context?

Number of correct answers: **1**

- A) The improvement cycle frequency is typically lower compared to the frequency in a traditional environment.
- B) The focus is on doing test process improvement at an organizational level.
- C) Since all team members typically perform some testing tasks in an Agile project, test improvement ideas can indeed come from any team member not just the testers.
- D) The level of documentation is typically high, thereby allowing for many opportunities for improving the test documentation.

Learning Objective 5.3 “Explain with examples how the TMMi process areas, goals and practices should be interpreted and can be used in an Agile context”

27. Which of the following is an Agile practice that can be applied as a way to establish a test strategy (G2) within the Test Policy and Strategy process area?

Number of correct answers: **1**

- A) Testing quadrants
- B) Velocity
- C) Release planning
- D) Definition-of-done

Learning Objective 5.4 “Understand how TMMi can be used in a DevOps context, and how the two can complement each other”

28. A development organization is adopting DevOps and wants to use TMMi to improve its testing. Which statement BEST describes how TMMi should be applied?

Number of correct answers: **1**

- A) TMMi practices should be ignored because DevOps already defines the required testing approach.
- B) TMMi should be applied only to the final testing activities before production deployment.
- C) TMMi practices should be interpreted in the DevOps context and adapted where appropriate to support integrated and continuous testing.
- D) TMMi requires the organization to establish a separate test process outside the DevOps value stream.

1.6 Artificial Intelligence

Learning Objective 6.1 “Understand the difference between testing AI-based systems and using AI for testing”

29. An organization is testing a customer-service application that uses a machine-learning model to classify incoming customer requests. The testers evaluate the quality of the training data, the model's accuracy, and its robustness against different inputs.

Which statement BEST describes this situation?

Number of correct answers: **1**

- A) The organization is using AI for testing because machine-learning techniques are involved in the testing activities.
- B) The organization is testing an AI-based system because the AI component is part of the system under test.
- C) The organization is applying AI to test automation because the model is being evaluated using automated tests.
- D) The organization is performing AI-assisted test process improvement because AI is used to evaluate test results.

Learning Objective 6.2 “Understand how TMMi can be used when testing AI-based systems”

30. An organization is testing an AI-based system whose machine-learning model may produce different results for similar inputs. The test team wants to apply TMMi without introducing a completely separate test process.

Which statement BEST describes how TMMi can be used in this situation?

Number of correct answers: **1**

- A) TMMi is not applicable because its testing practices assume deterministic system behavior.
- B) TMMi can be applied, but its goals and practices may need to be interpreted in the context of AI-specific characteristics, e.g., non-deterministic behavior
- C) TMMi can only be applied once the AI model has been replaced by deterministic software.
- D) TMMi requires all AI-specific testing activities to be defined as separate process.

Learning Objective 6.3 “Explain with examples, how the TMMi process areas, goals and practices should be interpreted and can be used when testing AI-based systems”

31. An organization is testing an AI-based recruitment system. As part of the TMMi Non-Functional Testing process area, the test team wants to address quality risks specific to AI-based systems.

Which set of quality characteristics would BEST demonstrate an appropriate interpretation of the TMMi Non-Functional Testing process area for this AI-based system?

Number of correct answers: **1**

- A) Accuracy, robustness, fairness, explainability and privacy
- B) Accuracy, maintainability, portability and configurability
- C) Robustness, coding standards compliance, documentation quality and testability
- D) Availability, maintainability, portability and reusability

Learning Objective 6.5 “Explain, with examples, how Artificial Intelligence and GenAI can support the TMMi process areas and goals”

32. A TMMi Level 3 organization wants to use GenAI to support its Peer Reviews process area. The organization provides the GenAI tool with relevant source documents, applicable standards and checklists, as well as a list of defects identified in previous reviews.

What is the BEST description of how GenAI can support the peer review process?

Number of correct answers: **1**

- A) GenAI can replace the peer review approach by automatically approving documents and code.
- B) GenAI can perform verification reviews of documents and software code, using the provided sources and previous review defects to improve the quality of the review outcome.
- C) GenAI can determine the organization's product quality level based on the defects identified during peer reviews.
- D) GenAI can find standards and checklists, including typical defects, by itself and these should not be provided since it limits the GenAI support for peer reviews.

1.7 TMMi Assessments

Learning Objective 7.2 “Compare informal assessments to formal assessments”

33. Which of the following statements regarding formal and/or informal assessments is FALSE?

Number of correct answers: **1**

- A) Formal TMMi assessments must be led by an accredited TMMi lead assessor.
- B) Both formal and informal TMMi assessments will provide an official result on test process maturity.
- C) Informal assessments require only one type of evidence.
- D) Both formal and informal assessments will provide a list of strengths and weaknesses of an organization against the TMMi model.

Learning Objective 7.1 “Explain the role of assessments within the overall improvement process”

34. Which of the following are valid reasons to perform a TMMi assessment?

- i. Evaluate the performance of testers
- ii. Find areas that need to be improved
- iii. Determine which accomplishments have been made
- iv. As a basis to become formally TMMi certified

Number of correct answers: **1**

- A) i, ii and iii
- B) i, ii and iv
- C) i, iii and iv
- D) ii, iii and iv

Learning Objective 7.2 “Compare informal TMMi assessments with formal TMMi assessments”

35. Consider the following characteristics of an assessment:

- the assessment is performed by an accredited TMMi assessor.
- only interviews are used as evidence.

To which type of assessment do these characteristics relate?

Number of correct answers: **1**

- A) Informal assessments
- B) Formal assessments
- C) Both formal and informal assessments
- D) Neither formal nor informal assessments based on TAMAR

Learning Objective 7.3 “Summarize the TMMi assessment process, including component rating”

36. During a TMMi assessment the percentage of process achievement for Goal 1 Perform a Product Risk Assessment of the Test Planning process area has been determined at 40%.

Which of the following compliance ratings would you assign to Goal 1 Perform a Product Risk Assessment?

Number of correct answers: **1**

- A) Not Achieved
- B) Partially Achieved
- C) Largely Achieved
- D) Fully Achieved

1.8 Implementing TMMi

Learning Objective 8.1 “Summarize the activities of the Initiating phase of the improvement framework”

37. Which of the following activities is an activity that will typically be performed as part of the Initiating phase of a test improvement cycle?

Number of correct answers: **1**

- A) Analyse and Validate
- B) Plan Actions
- C) Develop Recommendations
- D) Charter Infrastructure

Learning Objective 8.2 “Summarize the activities of the diagnosing phase of the improvement framework”

38. During the diagnosing phase a TMMi assessment is performed to determine the current maturity status of the organization.

Which activity is performed in addition to the assessment during the diagnosing phase?

Number of correct answers: **1**

- A) Set Priorities
- B) Plan Actions
- C) Develop Approach
- D) Develop Recommendations

Learning Objective 8.4 “Summarize the activities of the acting phase of the improvement framework”

39. Which of the following activities are part of the Acting phase of a test improvement cycle?

- i) Set Priorities
- ii) Create Solutions
- iii) Plan Actions

Number of correct answers: **1**

- A) i and ii
- B) i and iii
- C) ii and iv
- D) ii, iii and iv

Learning Objective 8.6 “Understand that TMMi should not be used as a checklist”

40. An organization starts its TMMi improvement initiative by creating a spreadsheet containing every TMMi practice and subpractice. The improvement team then plans to implement each item in the spreadsheet in the order presented in the model.

Which statement BEST describes this approach?

Number of correct answers: **1**

- A) It is appropriate because all TMMi practices and subpractices must be implemented to achieve a TMMi maturity level.
- B) It is appropriate because following the order of the TMMi model ensures that improvements are implemented consistently.
- C) It is not the intended use of TMMi because goals and practices should be interpreted and prioritized according to the organization's context and business needs.
- D) It is only inappropriate when the organization is pursuing formal TMMi certification.

2 Answers and Justifications

2.1 Introduction to the TMMi model

Question 1: B

Answer A) is incorrect, as introducing risk-based testing is typically not a reason why a business would start a test improvement program, although it may well be one of the improvements introduced.

Answer B) is the correct answer, since improving testing could well support achieving a higher level of product reliability.

Answer C) is incorrect, there most often is not a direct connection between an increase in market share and a test improvement program.

Answer D) is incorrect, providing career paths for test professionals will typically not be a business reason for starting a test improvement program.

Question 2: C

Answer A) is incorrect because technology does not automatically improve a process.

Answer B) is incorrect because simply acquiring more advanced technology does not address the people aspect.

Answer C) is correct. The PPT Framework emphasizes that People, Process and Technology are interrelated. Technology alone does not ensure improvement. People need the appropriate knowledge, skills and competencies to effectively use and benefit from the technology.

Answer D) is incorrect because people, process and technology should be considered together when improving the test process.

Question 3: A

Answer A) is the correct answer, increasing motivation may be an indirect result of improving processes though not a direct result of actions (unlike a dedicated program to increase personnel motivation).

Answer B) is incorrect, a shortened lead-time of test execution is a direct benefit.

Answer C) is incorrect, achieving a higher level of defect detection would be a direct benefit.

Answer D) is incorrect, more reliable test estimations would increase test predictability and would therefore be an example of a direct benefit.

Question 4: B

Answer A) is incorrect, TMMi is not limited to testing activities within software development projects only. It addresses organizational test process improvement more broadly.

Answer B) is the correct answer TMMi provides a framework for test process improvement and is intended to be lifecycle independent. It can therefore be applied in different development lifecycle contexts rather than prescribing a particular lifecycle.

Answer C) is incorrect, TMMi is not primarily a framework for selecting or implementing test automation tools. Test automation may support test maturity, but it is not the model's primary purpose.

Answer D) is incorrect, TMMi does not prescribe a specific test lifecycle. Instead, it provides a maturity model and best practices that can be applied within various lifecycles

2.2 TMMi Maturity Levels

Question 5: C

Answer C) is the correct answer according to the TMMi Framework.

Test Design and Execution and Implementation and Habit are TMMi level 2 process areas, Quality Control is a TMMi level 5 process area, and only Non-Functional Testing is a level 3 process area.

Question 6: B

Answer B) is the correct answer. Both Test Organization and Test Training Program are process areas at TMMi level 3.

Question 7: C

Answer A) is incorrect, testing at Level 1 is ad hoc and unmanaged.

Answer B) is incorrect, at Level 2, basic test management practices exist, but processes may still vary by project and are not yet fully institutionalized organization wide.

Answer C) is the correct answer, at TMMi Level 3 “Defined”, the standard test process is institutionalized across the organization, testing starts as early as possible, and test improvements also focus on non-functional quality characteristics.

Answer D) is incorrect, at Level 4, the focus is on quantitative measurement and control of test processes and product quality.

Question 8: A

Answer A) is the correct answer, the description is a classic characterization of TMMi Level 1; There are no defined process areas at Level 1, there are no goals that must be achieved, and success depends heavily on the competence, experience, and individual heroics of the people involved rather than on established processes.

Answer B) is incorrect, at Level 2, defined process areas and goals exist and basic test management practices are established.

Answer c) is incorrect, at Level 3, defined process areas and goals exist and processes are standardized and institutionalized across the organization.

Answer D) is incorrect, at Level 4, defined process areas and goals exist and testing is quantitatively managed using metrics and measurement.

2.3 Structure of the TMMi

Question 9: B

Answer A) is incorrect, as required components are the goals, not the practices.

Answer B) is the correct answer, this relates to expected components, especially the part “either the practices as described or *acceptable alternatives to the practices* must be present” has the answer hidden in it.

Answer C) is incorrect, because although informative components provide guidance and examples, they are not required for achieving goals.

Answer D) is incorrect, alternative component is not a TMMi framework component category.

Question 10: A

Answer A) is the correct answer, goals are required components

Answer B) is incorrect, practices are expected components

Answer C) is incorrect, sub practices are informative components.

Answer D) is incorrect, purpose statements are informative components.

Question 11: B

At TMMi level 3 the standard test process becomes a defined process and will be fully institutionalized across the organization. The purpose of Test Process and Integration is to establish, maintain and deploy a set of *organizational* test processes and test process assets necessary to perform the work. An initial set of test processes is established at TMMi level 2 with Implementation and Habit, however they are typically defined at project, team or organizational unit level and as such may vary across the organization.

Question 12: C

Answer A) is incorrect, it is vice-versa, the TMMi process areas provide support for the implementation of the CMMI practice areas Verification & Validation.

Answer B) is incorrect, TMMi can be used independently of CMMI, there is no need to also address the CMMI practice area Verification & Validation in parallel with the testing processes within the TMMi.

Answer C) is the correct answer, the TMMi process areas provide support and a more detailed description of what is required to establish a defined Verification & Validation process. The CMMI practice area Verification & Validation only addresses testing practices at a high level.

Answer D) is incorrect, being fully achieved for the TMMi level 2 process areas Test Planning and Test Monitoring and Control does not provide full compliance for Verification & Validation. At a minimum, the practices from Test Design and Execution are also needed.

2.4 TMMi model

Question 13: B

Answer A) is incorrect, Test Techniques is not a defined process area within TMMi.

Answer B) is correct, Establish Test Estimates is a goal within the Test Planning process area.

Answer C) is incorrect, this process area covers the analysis, design and execution of test cases.

Answer D) is incorrect, while test estimation practices should be part of Test Training Program, the process is established within the Test Planning process area.

Question 14: D

Answer A) is incorrect, the practice Implement test cases is part of Goal 2 “Perform Test Implementation” once test analysis and design has been completed.

Answer B) is incorrect, “Specify smoke test” is part of Goal 2 “Perform Test Implementation”. The smoke test is used to decide at the beginning of test execution whether the test object is ready for detailed and further testing.

Answer C) is incorrect, there is no practice under this name. However, test charters could be used with Agile testing instead of detailed test conditions and test designs, as they largely serve the same intent.

Answer D) is correct, identifying and prioritizing test conditions is an important part of developing effective test cases.

Question 15: A

Answer A) is correct, one of the objectives of Test Policy and Strategy is to develop a test policy. Part of the test policy is the definition of the organizational approach to and objectives of test process improvement.

Answer B) is incorrect, the objective of Test Planning is to define a test approach based on risks.

Answer C) is incorrect, the objective of Test Process Optimization is to continuously improve testing processes in the organization and to identify new testing technologies that may be appropriate.

Answer D) is incorrect, the objective of Product Quality Evaluation is to develop a quantitative understanding of the quality of the products, and thereby support the achievement of projects’ specific product quality goals.

Question 16: D

Answer A) is incorrect, perform test environment smoke test is part of G2 Perform Test Environment Implementation.

Answer B) is incorrect, analyze the test environment and test data requirements is part of G1 Develop Test Environment Requirements.

Answer C) is incorrect, create generic test data is part of G2 Perform Test Environment Implementation.

Answer D) is correct, this practice is part of G3 of the Test Environment process area.

Question 17: C

Answer A) is incorrect, while a Test Training Program can support a career path by organizing necessary training, first the functions and their respective career paths need to be defined.

Answer B) is incorrect, while the test functions can be outlined as part of Test Policy and Strategy, the full development of functions and career paths is a process area at TMMi maturity level 3.

Answer C) is correct, the Test Organization process area specifically addresses establishing test functions for test specialists and test career paths.

Answer D) is incorrect, Test Planning does not cover defining test functions and career paths.

Question 18: C

Answer A) is incorrect, while effective test design is needed also for reliability testing, the Test Design and Execution process area focuses on functional testing.

Answer B) is incorrect, while appropriate test environments will be needed to perform reliability testing, first the product risks in terms of reliability need to be assessed in order to understand the requirements for the test environment.

Answer C) is correct, reliability testing is part of non-functional testing and a non-functional product risk assessment should be conducted as a starting point for reliability testing.

Answer D) is incorrect, Product Quality Evaluation focuses on establishing a quantitative understanding of product quality, including reliability, this process area builds on the experiences and practices of Non-functional Testing at TMMi level 3.

Question 19: A

Answer A) is the correct answer, providing necessary test training is a goal within the Test Training Program process area.

Answers B), C) and D) are all incorrect, as all are goals within the Test Organization process area.

Question 20: C

Answer C) is incorrect, with Non-Functional Testing practices are defined that have a link to similar practices within Test Planning. The purpose of Non-Functional Testing is to improve test process capability to include non-functional testing during test planning, test design and execution. In description of the process area Non-Functional Testing the link with Test Planning is explicitly mentioned.

Question 21: B

Answer B) is correct, Establish Quantitative Project Goals for Product Quality is goal G1 of the process area Product Quality Evaluation.

Question 22: C

Answer C) is correct, it is the purpose of the process area Test Process Optimization to continuously improve the existing testing processes used in the organization and to identify new testing technologies that may be appropriate and to transition them into the organization in an orderly manner.

Question 23: B

Answer A) is incorrect, Product Quality Evaluation is a process area at TMMi maturity level 4.

Answer B) is correct, Quality Control is a process area at TMMi maturity level 5.

Answer C) is incorrect, Peer Reviews is a process area at TMMi maturity level 3.

Answer D) is incorrect, Test Measurement is a process area at TMMi maturity level 4.

Question 24: B

Answer A) is incorrect, this practice and goal are part of the process area Quality Control.

Answer B) is correct, this practice and goal are part of the process area Defect Prevention (G2 and P2.2).

Answer C) is incorrect, this practice and goal are part of the process area Test Process Optimization.

Answer C) is incorrect, this practice and goal are part of the process area Test Process Optimization.

2.5 TMMi in Agile and DevOps context

Question 25: B

Answer A) is incorrect, TMMi does not impose testing practices on any organization, no matter what development lifecycle is used. Rather, 'TMMi in the Agile world' [TMMiAgile] explains how TMMi can be used and applied beneficially in an Agile context by providing proven alternatives to traditional testing practices that could be implemented by Agile projects.

Answer B) is the correct answer, this is one of the main intentions of 'TMMi in Agile world' document.

Answer C) is incorrect, this is how a TMMi test process improvement project could benefit from Agile.

Answer D) is incorrect, both types of process areas are also important within an Agile context. The test engineering process areas will focus much on the activities with the teams, but other process areas will ensure institutionalization.

Question 26: C

Answer A) is incorrect, in projects that use Agile, improvements generally take place in frequent feedback loops, which enable test process improvements to be considered frequently. Small but frequent improvements are made, so the improvement cycle frequency is higher, not lower.

Answer B) is incorrect, in an Agile context, test-related improvement decisions often take place in retrospective meetings, mainly focused on test improvements that will be implemented in the next iteration at an Agile team level, and usually not throughout the whole organization or at cross project level.

Answer C) is the correct answer. This is specifically referred to in Section 1.5 of 'TMMi in the Agile World' [TMMiAgile].

Answer D) is incorrect, in an Agile context, the test and process documentation are typically more light-weight compared to a traditional project following a sequential lifecycle model.

Question 27: A

Answer A) is correct, test strategy in an Agile context defines at a high-level the testing to be done in the Agile teams (iteration teams), the test types, test quadrants and test levels to be performed and their approach.

Answer B) is incorrect, velocity is an estimation of a team's productivity and is more related to establishing test performance indicators.

Answer C) is incorrect, release planning is mainly related to the process area Test Planning.

Answer D) is incorrect, definition-of-done is an appropriate criterion for release (sprint) completion and is therefore more applicable to the process areas Test Planning and Test Monitoring and Control.

Question 28: C

Answer A) is incorrect, DevOps does not eliminate the need for test process improvement. TMMi remains relevant and has specifically supports Agile and DevOps ways of working.

Answer B) is incorrect, in DevOps, testing is integrated throughout the lifecycle and supports continuous delivery, rather than being limited to final testing before deployment.

Answer C) is the correct answer, TMMi can be applied in a DevOps context, but its practices should be interpreted and, where appropriate, adapted to the characteristics of DevOps. Testing should be integrated

into the development and delivery process, supported by automation and continuous feedback.

Answer D) is incorrect, TMMi does not require a separate testing organization or isolated test process. Instead, testing should be integrated into development and delivery processes, aligning with the principles of DevOps.

2.6 Artificial Intelligence

Question 29: B

Answer A) is incorrect, AI for testing means using AI techniques to support testing activities (for example, generating test cases, prioritizing tests, or analyzing defects). Here, the AI is being tested, not performing the testing.

Answer B) is the correct answer, the distinction is based on what AI is being used for. Here, the AI component is part of the system under test, and the testing focuses on the behavior and quality of that AI-based system. Therefore, this is testing an AI-based system. Using AI for testing, in contrast, means applying AI techniques to support or improve the testing activities themselves.

Answer C) is incorrect, the question does not state that AI is being used for test automation. Even if automated tests are used, the key point is that the AI model itself is the object being tested.

Answer D) is incorrect, AI-assisted test process improvement refers to using AI to improve testing processes, metrics, or decision-making, which is not what is happening in this scenario.

Question 30: B

Answer A) is incorrect, TMMi is not restricted to deterministic systems.

Answer C) is incorrect, TMMi does not require AI models to be replaced by deterministic software before it can be applied.

Answer B) is the correct answer, TMMi can be applied when testing AI-based systems, but the goals and practices may need to be interpreted in the context of AI. AI-based systems can have characteristics such as probabilistic or non-deterministic behavior, and testing may therefore require consideration of AI-specific aspects such as data, models and associated risks. TMMi provides the structured test process, rather than requiring a separate set of AI-specific process areas.

Answer D) is incorrect, TMMi does not mandate a completely separate process for AI testing. The framework is intended to be integrated into existing development and testing practices, with adaptations where necessary.

Question 31: A

Answer A) is the correct answer, when applying TMMi to AI-based systems, the goals and practices of the Non-Functional Testing process area should be interpreted to address AI-specific quality characteristics and risks. Examples include:

- Robustness; maintaining acceptable behavior when inputs or conditions vary
- Fairness; avoiding unwanted bias and discrimination
- Explainability/Transparency; understanding and explaining AI decisions
- Privacy; protecting sensitive data used by the AI system
- Accuracy; ensuring the AI model performs to the required level.

These characteristics are specifically relevant to AI-based systems and are discussed in the context of testing AI systems and AI quality models. TMMi practices should therefore be adapted to ensure that these AI-specific quality concerns are adequately addressed

Answer B) is incorrect, as it includes traditional software qualities such as maintainability and portability, but omits important AI-specific concerns such as fairness, explainability, and privacy.

Answer C) is incorrect, as although coding standards compliance and documentation quality are useful engineering concerns, they are not the primary AI quality characteristics that drive risk in a recruitment model.

Answer D) is incorrect, as availability, maintainability, portability, and reusability are generic software quality attributes and do not address the main ethical and operational risks of AI-based decision-making.

Question 32: B

Answer A) is incorrect, GenAI should support, not replace, peer reviews. Final approval and judgment remain human responsibilities.

Answer B) is the correct answer, TMMi in Annex A [TMMiV2.0] states that for Peer Reviews, GenAI can review all types of documents and software code for verification. The review can be particularly effective when source documents, rules, standards, checklists and previous review defect lists are provided.

Answer C) is incorrect, product quality cannot be determined solely from peer review defects. Peer reviews provide useful quality information but are only one input to overall quality assessment.

Answer D) is incorrect, providing standards, checklists, and historical defects improves GenAI performance by supplying relevant context. Relying on the model to find and infer everything itself would generally reduce review accuracy and consistency.

2.7 TMMi Assessments

Question 33: B

Answer A) True. Formal TMMi assessments must be led by an accredited TMMi lead assessor.

Answer B) False. Only formal TMMi assessments provide an official result on test process maturity. Informal assessments are designed as a thorough check to evaluate the current state of the test processes against TMMi, but cannot lead to an official result about the process maturity.

Answer C) True. Informal assessments require only one type of evidence.

Answer D) True. Both formal and informal assessments will provide a list of strengths and weaknesses of an organization against the TMMi model.

Question 34: D

A TMMi assessment focuses on the organization's test maturity level and not on individual performance of testers. TMMi assessments can be executed at various moments. For example, a test process improvement program can start with an assessment to identify the areas that need to be improved. TMMi assessments can be used to determine which accomplishments to date have been made, and an organization can become formally TMMi certified through a TMMi formal assessment.

According to the above description, i is therefore incorrect, ii, iii and iv are valid statements, so answer D is correct.

Question 35: A

Answer A) is correct as for an informal assessment only an accredited TMMi assessor and one type of evidence collection is needed.

Question 36: B

Answer A) is incorrect, the score of “Not achieved” is from 0 to $\leq 25\%$.

Answer B) is correct, the score of “Partly achieved” is from $> 25\%$ to $\leq 60\%$

Answer C) is incorrect, the score of “Largely achieved” is from $> 60\%$ to $\leq 85\%$

Answer D) is incorrect, the score of “Fully Achieved” is from $>85\%$ to 100%

2.8 Implementing TMMi

Question 37: D

Answer A) is incorrect, Analyse and validate is part of the Learning phase.

Answer B) is incorrect, Plan actions is part of the Establishing phase.

Answer C) is incorrect, Develop recommendations is part of the Diagnosing phase.

Answer D) is correct, according to IDEAL, Initiating is the first phase in a test improvement cycle. During this phase the way in which the change and improvement project is executed is determined. The improvement infrastructure should also be put in place before one can start with the other phases and activities.

Question 38: D

Answer A) is incorrect, set priorities is part of the Establishing phase.

Answer B) is incorrect, plan actions is part of the Establishing phase

Answer C) is incorrect, develop approach is part of the Establishing phase.

Answer D, is correct, develop recommendations suggests a way forward in subsequent activities and is part of the Diagnosing phase.

Question 39: C

Answer A) is incorrect, set priorities (i) is part of the Establishing phase.

Answer B) is incorrect, set priorities (i) and plan actions (iii) are both part of the Establishing phase.

Answer C) is correct, the Acting phase is all about solutions. Both create solutions (ii) and pilot solutions (iv) are part of the Acting phase.

Answer D) is incorrect, plan actions (iii) is part of the Establishing phase.

Question 40: C

Answer A) is incorrect, not every subpractice must be implemented exactly as written. TMMi allows acceptable alternatives as long as the goals are satisfied.

Answer B) is incorrect, the TMMi model does not prescribe implementing improvements in the exact order the practices appear in the framework. Organizations should tailor and prioritize improvements.

Answer C) is the correct answer, TMMi should not be used as a checklist in which goals, practices and subpractices are simply ticked off one by one. The intent of the model is to interpret goals and practices in the organizational context and determine how they can deliver business and added value. The implementation and prioritization of TMMi should therefore be driven by business needs and context.

Answer D) is incorrect, this approach is not the intended use of TMMi regardless of whether formal certification is being pursued. TMMi is designed to support business-driven improvement, not checklist compliance.

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