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**Status** Finished**Started** Tuesday, 6 May 2025, 3:25 PM**Completed** Tuesday, 6 May 2025, 3:40 PM**Duration** 14 mins 27 secs**Grade** 39.00 out of 40.00 (97.5%)**Question 1**

Correct

Mark 2.00 out of 2.00

A test lead evaluates their organization's failed attempt at test process improvement. The team rushed to implement changes based on a management directive, without gathering testing team input. Although an initial assessment of change impact was done before execution, the team did not follow up with any evaluation after implementation. Six months later, bugs increased and testers reported confusion. No process performance was documented during this time.

**Which of the following underlying mistakes most likely contributed to the failure?***(Select all that apply)*

- ☒ a. Testers' on-the-ground feedback was excluded from the planning process. ✓
- ☒ b. The improvement lacked alignment with any quantifiable performance indicators. ✓
- ☒ c. Change impact was evaluated before executing the test changes, but not after implementation. ✓
- ☐ d. Baseline testing metrics were properly recorded but not reviewed.
- ☐ e. The team followed an iterative, phased rollout to minimize disruption.

**Your answer is correct.**

The correct answers are: Testers' on-the-ground feedback was excluded from the planning process., The improvement lacked alignment with any quantifiable performance indicators., Change impact was evaluated before executing the test changes, but not after implementation.



## Question 2

Correct

Mark 2.00 out of 2.00



Below are five key concepts related to **Test Data Management** and **Software Maintenance**. Match each concept with its most appropriate explanation based on standard industry practices.

Perfective Maintenance	Improving or adding features to enhance software performance beyond original requirements.	↕
	✓	
Data Sub setting	Creating a smaller, yet representative version of a production database for testing purposes	↕
	✓	
Corrective Maintenance	Making code changes to correct bugs or defects found during or after software release.	↕
	✓	
Data Masking	A method of protecting confidential test data by replacing sensitive fields with fake but usable values.	↕
	✓	
Synthetic Data Generation	Producing completely artificial datasets that imitate real data when actual data is unavailable or sensitive.	↕
	✓	

Your answer is correct.

The correct answer is: Perfective Maintenance → Improving or adding features to enhance software performance beyond original requirements., Data Sub setting → Creating a smaller, yet representative version of a production database for testing purposes, Corrective Maintenance → Making code changes to correct bugs or defects found during or after software release., Data Masking → A method of protecting confidential test data by replacing sensitive fields with fake but usable values., Synthetic Data Generation → Producing completely artificial datasets that imitate real data when actual data is unavailable or sensitive.



## Question 3

Correct

Mark 2.00 out of 2.00

An organization at CMMI Level 3 identifies recurring defects across multiple projects due to inconsistent design practices. Based on the characteristics of Level 3, which process area should the organization prioritize to address this issue?

- ☐ a. Requirements Management (REQM)
- ☐ b. Quantitative Project Management (QPM)
- ☐ c. Supplier Agreement Management (SAM)
- ☒ d. Technical Solution (TS) ✓

Your answer is correct.

The correct answer is: Technical Solution (TS)

## Question 4

Correct

Mark 2.00 out of 2.00

Match each **Key Process Area (KPA)** with its corresponding **CMMI Maturity Level**

Quantitative Process Management	Level 4 – Managed	✓
Training Program	Level 3 – Defined	✓
Requirements Management	Level 2 – Repeatable	✓
Software Project Planning	Level 2 – Repeatable	✓
Process Change Management	Level 5 – Optimizing	✓

Your answer is correct.

The correct answer is: Quantitative Process Management → Level 4 – Managed, Training Program → Level 3 – Defined, Requirements Management → Level 2 – Repeatable, Software Project Planning → Level 2 – Repeatable, Process Change Management → Level 5 – Optimizing

## Question 5

Correct

Mark 2.00 out of 2.00

During a routine software audit, a project team observes the following:

- Module A has frequent change requests and high impact analysis time.
- Module B has fewer change requests but higher complexity in control and data structures.
- Module C has minimal changes but a consistently high average time to implement them.



As a software engineer evaluating maintainability risk, which module should be prioritized for a re-engineering effort and why?

- ☒ a. Module B, because internal complexity can lead to exponential maintenance effort even with fewer changes. ✓
- ☐ b. All modules equally, because each presents a unique risk profile that affects system stability.
- ☐ c. Module A, because the high volume of changes directly indicates low maintainability.
- ☐ d. Module C, because high implementation time suggests poor documentation and unclear structure.

Your answer is correct.

The correct answer is: Module B, because internal complexity can lead to exponential maintenance effort even with fewer changes.

## Question 6

Correct

Mark 2.00 out of 2.00

A software company has started collecting detailed data on software quality and process performance. The team uses this data to take corrective actions when the process deviates from expected behavior. Based on this practice, which CMM maturity level has the company most likely reached?

- ☐ a. Level 3 – Defined
- ☐ b. Level 5 – Optimizing
- ☐ c. Level 2 – Repeatable
- ☒ d. Level 4 – Managed ✓

Your answer is correct.

The correct answer is: Level 4 – Managed

## Question 7

Correct

Mark 2.00 out of 2.00

A software team observes that maintenance costs are increasing steadily over time. After reviewing historical data, they find that specific modules with high data structure complexity and frequent modifications are the main contributors. The team decides to analyze these components to prioritize refactoring.

Which of the following is the most appropriate conclusion from this scenario?



- ☒ a. Complexity of data structures and control logic should be considered to predict maintenance effort ✓
- ☐ b. All components in the system require equal focus for cost-effective maintenance
- ☐ c. Increased module size directly reduces maintenance cost and effort
- ☐ d. Maintenance cost is mostly influenced by user interface enhancements

Your answer is correct.

The correct answer is: Complexity of data structures and control logic should be considered to predict maintenance effort

## Question 8

Correct

Mark 2.00 out of 2.00

Agile testing is conducted only after the software development phase is complete.

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

## Question 9

Correct

Mark 2.00 out of 2.00

An organization plans to adopt a formal strategy for **Test Process Improvement** based on the **TMMi maturity model**. A consulting team evaluates the organization's current test maturity level and identifies areas for improvement. The team observes the following: inconsistent test planning, lack of monitoring, undocumented test environments, and frequent delays in test execution.

To progress to the next TMMi level, recommendations are made based on best practices in process improvement.

**Which of the following recommendations are aligned with advancing to at least TMMi Maturity Level 2 (Managed)?**

**Please note:** Selecting even one incorrect option will result in **zero marks** for this question.

- ☒ a. Establish formal test policy and strategy across projects ✓
- ☐ b. Ensure peer reviews and structured training for all testers
- ☐ c. Focus exclusively on non-functional testing and performance bottlenecks
- ☒ d. Define and document test environments and execution conditions ✓
- ☒ e. Implement test planning, monitoring, and control mechanisms ✓

Your answer is correct.

The correct answers are: Establish formal test policy and strategy across projects, Define and document test environments and execution conditions, Implement test planning, monitoring, and control mechanisms

## Question 10

Correct

Mark 2.00 out of 2.00



Analyze the Agile testing process and select the statements that best reflect Agile's approach to ensuring software quality. (Select all that apply)

- ☐ a. Testing is done after development to validate the final product
- ☐ b. Test planning happens once at the beginning of the project
- ☒ c. Agile testing helps in delivering working features in short time frames ✓
- ☒ d. Agile testing adapts quickly to changes in customer requirements ✓
- ☒ e. Agile testers collaborate closely with developers during each iteration ✓

Your answer is correct.

The correct answers are: Agile testers collaborate closely with developers during each iteration, Agile testing adapts quickly to changes in customer requirements, Agile testing helps in delivering working features in short time frames

## Question 11

Correct

Mark 2.00 out of 2.00

Match each **CMMI Maturity Level** with its most appropriate **description** based on the process focus and maturity intent.

Level 4 – Managed	Uses quantitative techniques to control variability and ensure predictable outcomes	↕	✓
Level 1 – Initial	Characterized by ad hoc, chaotic processes dependent on individual effort	↕	✓
Level 5 – Optimizing	Emphasizes continuous improvement using feedback, causal analysis, and innovation	↕	✓
Level 3 – Defined	Establishes standardized, documented processes across the organization	↕	✓
Level 2 – Repeatable	Focuses on basic project management to allow repetition of success from previous projects	↕	✓

Your answer is correct.

The correct answer is: Level 4 – Managed → Uses quantitative techniques to control variability and ensure predictable outcomes, Level 1 – Initial → Characterized by ad hoc, chaotic processes dependent on individual effort, Level 5 – Optimizing → Emphasizes continuous improvement using feedback, causal analysis, and innovation, Level 3 – Defined → Establishes standardized, documented processes across the organization, Level 2 – Repeatable → Focuses on basic project management to allow repetition of success from previous projects

## Question 12

Correct

Mark 2.00 out of 2.00

A product team evaluates software maintainability metrics after observing increased time in delivering patches and updates. Upon analysis, key measurements related to change effort, request volumes, and internal complexity are reviewed.



**Which of the following indicators strongly suggest a potential decline in maintainability and the need for test process improvement?**

**Please note:** Selecting even one incorrect option will result in **zero marks** for this question.

- ☒ a. Rising trend in corrective maintenance requests over multiple versions ✓
- ☒ b. Increase in unresolved change requests across modules ✓
- ☐ c. Reduction in average time for impact analysis and change implementation
- ☒ d. High number of urgent fixes related to control structure issues ✓
- ☒ e. Increase in module size and internal structural complexity ✓

Your answer is correct.

The correct answers are: Increase in unresolved change requests across modules, Increase in module size and internal structural complexity, High number of urgent fixes related to control structure issues, Rising trend in corrective maintenance requests over multiple versions

## Question 13

Partially correct

Mark 1.50 out of 2.00

A software project follows standard configuration management practices to handle changes and maintain consistency across versions. These practices are essential to avoid conflicts, track approved updates, and maintain traceability of all modifications.

**Which of the following are essential configuration management tasks according to industry standards?**

**Please note:** Selecting even one incorrect option will result in **zero marks** for this question.

- ☐ a. Reporting updates to relevant stakeholders after changes
- ☒ b. Identification and version tracking of configuration items ✓
- ☒ c. Conducting regular audits of implemented configuration changes ✓
- ☐ d. Managing and logging memory allocation errors during execution
- ☒ e. Change control through authorization and prioritization ✓

Your answer is partially correct.

You have correctly selected 3.

The correct answers are: Identification and version tracking of configuration items, Change control through authorization and prioritization, Reporting updates to relevant stakeholders after changes, Conducting regular audits of implemented configuration changes

## Question 14

Correct

Mark 2.00 out of 2.00



Match Configuration Management and Change Control Terms with Their Descriptions

Configuration Status Reporting	Process of documenting and reporting what changes were made, by whom, and when	✓
Variant	A modified set of configuration items created for a specific use case under the same revision level	✓
Synchronization Control	Process that ensures parallel changes made by different team members do not conflict or overwrite each other	✓
Configuration Audit	A formal review that verifies whether changes were made correctly and followed established standards	✓
Change Control Authority	Group responsible for evaluating, approving, and assigning priority to change requests	✓

Your answer is correct.

The correct answer is: Configuration Status Reporting → Process of documenting and reporting what changes were made, by whom, and when, Variant → A modified set of configuration items created for a specific use case under the same revision level, Synchronization Control → Process that ensures parallel changes made by different team members do not conflict or overwrite each other, Configuration Audit → A formal review that verifies whether changes were made correctly and followed established standards, Change Control Authority → Group responsible for evaluating, approving, and assigning priority to change requests

## Question 15

Correct

Mark 2.00 out of 2.00

A quality assurance team is repeatedly encountering functional bugs in a banking application, particularly in its transaction and login modules. An initial assessment reveals that basic testing is being applied equally across all features, and defect reports often cite unclear requirements. Management is considering applying process maturity improvements to reduce such defects long-term.

Which of the following actions would most likely help the team resolve the issue and improve future outcomes? (Select only correct answer/s)

- ☐ a. Delay testing until all modules are coded to avoid redundant test effort.
- ☐ b. Apply uniform test coverage to all features regardless of business impact.
- ☒ c. Adopt Root Cause Analysis to trace defects back to requirement ambiguity. ✓
- ☒ d. Use Risk-Based Testing to prioritize transaction and login modules. ✓
- ☒ e. Focus on improving software process maturity for greater consistency. ✓

Your answer is correct.

The correct answers are: Adopt Root Cause Analysis to trace defects back to requirement ambiguity., Use Risk-Based Testing to prioritize transaction and login modules., Focus on improving software process maturity for greater consistency.

## Question 16

Correct

Mark 2.00 out of 2.00

What happens during the "Improve" phase of a Six Sigma DMAIC project?

- ☐ a. Data is collected and arranged for analysis
- ☐ b. Problems are identified and project goals are set
- ☐ c. Root causes are predicted and validated
- ☒ d. Solutions are tested and implemented based on analysis ✓

Your answer is correct.

The correct answer is:

Solutions are tested and implemented based on analysis





## Question 17

Correct

Mark 2.00 out of 2.00

**Question:**

A system maintenance team is investigating the causes behind the increased time taken to implement change requests. After analyzing system metrics and architecture, they find:

- The system has a high number of interconnected modules.
- Several modules show increasing complexity in data and control structures.
- The version control system has multiple active variants of the same components.
- Baseline updates are frequently bypassed due to urgent change implementations.

**Which of the following factors are most likely contributing to the decline in system maintainability?**

*(Select only the correct answer/s)*

- ☒ a. Variant management can increase system complexity and maintenance overhead. ✓
- ☐ b. Isolated variants always reduce change propagation risks.
- ☒ c. Complexity in data/control structures makes impact analysis harder. ✓
- ☐ d. Frequent baseline updates enhance change traceability and control.
- ☒ e. High inter-module coupling increases the ripple effect of changes. ✓

Your answer is correct.

The correct answers are: High inter-module coupling increases the ripple effect of changes., Variant management can increase system complexity and maintenance overhead., Complexity in data/control structures makes impact analysis harder.

## Question 18

Partially correct

Mark 1.50 out of 2.00



An organization is using the **TPI Next model** and wants to move from **Level 2 (Controlled)** to **Level 4 (Optimizing)**.

Currently, their testing is semi-structured, with some overlapping tasks, post-release bugs, and no process to learn from past mistakes.

**Which actions will help them reach Level 4?**

*(Select all correct answers – even one wrong choice will give zero marks.)*

- ☒ a. Form an expert team to improve testing using feedback. ✓
- ☐ b. Remove repeated testing steps to make the process smoother
- ☒ c. Use automated CI/CD and include feedback in each cycle. ✓
- ☒ d. Learn from old projects and keep improving the process. ✓
- ☐ e. Start using basic documents and controls for testing.

Your answer is partially correct.

You have correctly selected 3.

The correct answers are: Form an expert team to improve testing using feedback., Remove repeated testing steps to make the process smoother, Use automated CI/CD and include feedback in each cycle., Learn from old projects and keep improving the process.

## Question 19

Correct

Mark 2.00 out of 2.00

You are hired as a QA consultant for a startup where testing practices differ significantly across teams. Some teams test early and document their process, while others skip testing until after development. The CTO wants a uniform approach that embeds testing earlier and ensures non-functional testing is not overlooked.

- ☐ a. Create isolated testing methods per team to fit their existing routines.
- ☒ b. Standardize test processes across the organization and train all teams. ✓
- ☐ c. Track test cases without enforcing any process changes.
- ☐ d. Focus solely on testing post-development to save early-phase effort.

Your answer is correct.

The correct answer is: Standardize test processes across the organization and train all teams.

## Question 20

Correct

Mark 2.00 out of 2.00

An organization wants to improve software quality by analyzing the causes of recurring defects and implementing strategies to avoid them in future projects. This activity best aligns with which **Key Process Area (KPA)** from CMMI Level 5?

- ☒ a. Defect Prevention ✓
- ☐ b. Software Quality Assurance
- ☐ c. Technology Change Management
- ☐ d. Software Configuration Management



Your answer is correct.

The correct answer is: Defect Prevention

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