

QUESTIONS I GOT WRONG

1. Which types of tests can be automated?

- a. Performance
- b. Smoke
- c. Unit
- d. Integration
- e. Functional

2. What is a unit test?

A test that **isolates and verifies individual units of source code.**

3. Which of the following are **NOT** funcs of code quality?

- a. Code coverage
 - i. Note regarding Code Coverage: Code Coverage might be an **indicator**, but it would not be considered a **metric** of Code Quality.
- b. Cycle time per feature

4. When do the Developers participate in Product Backlog refinement?

Anytime during the sprint

5. **True or False:** Test-Driven Development is a predictable way to develop working, well-organized code?

False

- Test-Driven Development is a technique where Developers develop a test case for each desired behavior of a unit of work and then extend the implementation to reflect this behavior. It can help to **write cleaner code** by emphasizing refactoring and it will **decrease the risk of bugs**. **But the practice itself will not guarantee these outcomes, it still must be applied correctly and needs skilled developers to achieve good results.**

6. While changing software, you find a bug in a previously delivered piece of functionality. What should you do?

Fix the bug if it is critical or easily fixed. Otherwise, put the new bug into the Product Backlog to be prioritized and fixed in an upcoming Sprint.

- Unless your company has specific guidance on fixing bugs, they represent work to be done and should be ordered on the Product Backlog by the PO.

Two exceptions are if the work to fix the bug is less than the work to actually file it, or if the bug is so critical that it would be negligent to leave it unfixed.

7. When a Continuous Integration build fails, who ideally ensures the build is repaired?
Whoever the developers agree should fix it.
8. Select the desirable characteristics of a unit test. (Choose the best four answers)
 - a. Each test makes assertions about **only one** logical concept.
 - b. Each test is **independent** of other unit tests.
 - c. The test executes **fast**.
 - d. Code in each test is as small as possible **while maintaining readability** of the code.
9. Product Backlog items are refined by:

The Scrum Team

- The Scrum **Team is self-managing**, they decide whether the Product Owner, Scrum Master, and all or some of the Developers should participate in Product Backlog refinement. A Scrum Team might also choose to invite stakeholders as they **see fit** to do so. Product Backlog refinement is not a mandatory event prescribed by Scrum, and Scrum Teams **should do Product Backlog refinement as needed to create Product Backlog items that are deemed ready for selection** at Sprint Planning.

QUESTIONS I GOT RIGHT

1. True or False: The Scrum Team must choose at least one **high priority process improvement item**, identified during the Sprint Retrospective, and place it in the Sprint Backlog. – FALSE

- An earlier version of the Scrum Guide prescribed the practice of placing one **improvement** in the Sprint Backlog. This was removed in the 2020 update to the Scrum Guide because it was felt to be too prescriptive. However, if this practice provides value to you then you should adopt it. It is simply not prescribed anymore but can still be valuable.

2. What does a test written with Test-Driven Development represent?

A technical requirement that must be satisfied

- Since the test exists before the code that makes it pass, the test acts as a requirement of the system under test.

3. Which are potential **benefits** of Test-Driven Development?

- a. It improves **quality** and reduces bugs.
- b. It promotes **good design** and separation of concerns.
- c. It causes you to **construct a test harness** that can be automated.
- d. It **speeds the overall development process**.

4. What happens during Sprint 0?

There's no such thing as Sprint 0

- Scrum does not include the concept of a Sprint 0. "Sprint 0" has become a phrase misused to describe the planning that occurs prior to the first sprint.

5. Which are attributes of a good bug report?

- a. Expected results and observed results.
- b. Build/version where bug was found.
- c. One bug per report.
- d. Simple and repeatable reproduction steps.
- e. Screenshots or other pictures of bugs in action when user interfaces are involved.
- f. Clear title and proper grammar in report

6. What is pair programming?

Two developers writing code together, providing constant peer review.

7. What are some **shortcomings** of code coverage as a measurement for how well a system or product is tested?

- a. Could create incentives to write tests that simply increase code coverage, rather than tests that find bugs without increasing coverage.
- b. Code coverage does not ensure that the most important or highest risk areas of the code are being exercised by tests.
- c. Code coverage does not necessarily provide functional coverage.

- *Code coverage is a useful metric, but not in isolation. It should not be considered a replacement for effective test design techniques.*

8. What are ways Developers can ensure a good application architecture?

- a. The Scrum Team should have a set of guiding architecture principles that every Developer understands and follows when writing code.
- b. The Developers plan some time each Sprint to discuss the architecture needed for the features planned in that Sprint.

- There is no specific "architect" role on a Scrum team, nor is there an architecture planning Sprint. But, a good architecture doesn't just happen automatically. Guiding principles and frequent conversations on the team help ensure that the most appropriate architecture is developed as it is needed by features being developed in the current Sprint.

9. Which describes the practice of expressing requirements as acceptance tests?

Acceptance Test-Driven Development

- Advanced practices of Test-Driven development can lead to Acceptance Test-Driven Development (ATDD) where the criteria specified by the customer are automated into acceptance tests, which then drive the traditional Unit Test-Driven Development process.

10. When is a system's architecture decided?

Throughout the project, as understanding emerges, and the Developers learn more about the product.

11. When does a Developer become accountable for the value of a Product Backlog item selected for the Sprint?

Never. The entire Scrum Team is accountable for creating value every Sprint.

12. Which of the following best describes Continuous Integration?

A software practice where developers integrate and verify their work frequently, often multiple times each day, to detect integration errors as quickly as possible.

13. Which of the following describe an architecture spike?

A small development activity to learn about technical elements of a proposed solution.

14. Why are automated builds important?

They **provide rapid assurance** that defects and configuration management issues have not been introduced.

- Builds are just an extra level of validation to make sure that you still have a unit of potentially shippable software. Automating builds makes that process very fast.

15. What is technical debt?

A term representing the **eventual consequences of poor technical choices**.

16. The Definition of Done describes the work that must be completed for every Product Backlog item. What should the Developers do **during the Sprint**, if they find a problem outside of their control that is blocking them from delivering work?

Immediately raise the issue to the Scrum Master as an impediment

17. Code Coverage is the **degree to which the system under test has been exercised by tests**.

18. Which statement describes how often the build should be executed?

Whenever new or modified code is pushed to the version control system.

19. Who should be present during Product Backlog refinement?

Anyone that the Scrum Team decides will be valuable during refinement.

- *The Scrum Team is self-managing, they decide whether the Product Owner, Scrum Master and all or some of the Developers should participate in Product Backlog refinement. A Scrum Team might also choose to invite stakeholders, release engineers, architects, or others who are not on the Scrum Team as long as those individuals will provide value during refinement. Product Backlog refinement is not a mandatory event prescribed by Scrum, and Scrum Teams should do Product*

Backlog refinement as needed to create Product Backlog items that are deemed ready for selection at Sprint Planning.

20. You are on a Scrum Team that is enhancing an existing product. Which is the LEAST useful piece of documentation you want to have at your disposal?

The full history of retrospective plans and lessons learned.

21. Which is a benefit of establishing naming standards for code? **Make code readable.**

22. Which of the following are **benefits** of Continuous Integration?

- a. It leads to higher transparency and rapid feedback to the team.
- b. Causes team members to consider each other's work and context.

23. Which of the following are **advantages** of Continuous Integration?

- a. Know immediately how a change affected the product.
- b. Reduce effort and risk when integrating changes.

24. Who is responsible for the system architecture of a product being developed using Scrum?

The developers

25. What are reasons to automate the software build process?

- a. Automation improves the quality of software by **making builds less error prone.**
- b. To get feedback on changes to the code early and often.

26. Should User Stories be part of the documentation generated by a Scrum Team?

Yes, if they are part of the definition of done (DoD).

27. True or False: Programmers and testers should **not** be included in **refining Product Backlog items.** **FALSE**

28. What does Code Coverage show? (Choose best answer)

Code being exercised by tests.

29. When are individuals with testing and quality expertise included in the software development effort? (Choose best answer)

From beginning and throughout all sprints

30. True or False: Only technical writers can create documentation during a Sprint. **FALSE**

31. Which of the following are attributes of a bad bug report? Choose best 3 answers.

- a. Vague statements or untested assumptions.
- b. Generic titles.
- c. Assigning blame.

32. Who **writes tests** in a Scrum Team? (Choose the best answer)

The developers

33. What are reasons to automate the software build process? (Choose best 2 answers)

- a. Automation improves the quality of software by making builds less error prone.
- b. To get feedback on changes to the code early and often.

34. What is the value of refactoring code? (Choose the best answer)

To improve readability and maintainability

STATS

Attempt	Percentage (%)	Duration
1	80	14:41
2	93.3	8:44
3	100	11:43
4	100	8:21
5	96.7	10:35
6	100	07:15
7	100	06:14

<https://www.classmarker.com/online-test/start/test-intro/?quiz=ncp5fac7839db8a1>

Takeaways:

PRODUCT BACKLOG REFINEMENT

- a. The **PRODUCT BACKLOG** reflects current understanding of the work to be done
- b. The **PRODUCT BACKLOG REFINEMENT** is regularly done by the entire Scrum Team
- c. The goal of **PRODUCT BACKLOG REFINEMENT** is to create a shared understanding

1. What is the role of management in scrum?
 - a. To monitor the development team's productivity
 - b. To identify and remove people that aren't working hard enough.
 - c. To facilitate the scrum teams with insights and resources that help them improve.
 - d. To continually monitor staff levels to the development teamsI selected: **C**.
2. Which three of the following are true about scrum? Choose 3
 - a. Scrum is a methodology where you can pick and choose which part of scrum you think will work for your environment.
 - b. Scrum is based on empirical process control theory.
 - c. Scrum is like traditional process but with self-organization to replace with project manager.
 - d. Each component of scrum server a specific purpose and is essential to scrums success and your usage of scrum to develop complex products.
 - e. Scrum is a framework for developing and sustaining complex project.I selected: **B, D, E**
3. Which of the following are true about the product owner role? Choose 2
 - a. The product owner is accountable for ordering the product backlog.
 - b. Multiple people can share the product owner role on a scrum team.
 - c. The product owner role can be played by a committee or a team of people.
 - d. The product owner is one person.I selected: **A, D**
4. For the purpose of transparency, when does scrum say a new increment of working software must be available.
 - a. When the product owner asks to create one
 - b. At the end of every sprint
 - c. Before the release sprint
 - d. Every 3 sprint
 - e. After the acceptance testing phaseI selected: **B**.
5. During a sprint when is new work or further decomposition of work added to the sprint backlog?
 - a. When the scrum master has time to enter them.
 - b. When the product owner identifies new work.
 - c. During the daily scrum after the development team approves them.
 - d. As soon as possible after they are identified.

I selected: **D**.

6. What are two ways that architecture and infrastructure are handles in scrum?
- a. They are built by separate team through the creation of an architectural runway.
 - b. They are implemented along with functional development of the product.
 - c. They are discussed, determined, and documented before the actual feature development sprints.
 - d. They are added to the product backlog and addressed in early sprint while always requiring at least some business functionality no matter how small.

I selected: **B, D**

7. Which outcome is expected as scrum team matures?
- a. The sprint retrospective will grow to be longer than 4 hours.
 - b. Scrum master is no longer needed since they are a mature team now.
 - c. There is no need for a time boxed sprint, since time boxed are only for new scrum teams.
 - d. Sprint review will no longer be needed.
 - e. They will improve their definition od done to include more stringent criteria.

I selected: **E**.

8. What are three ways scrum promoting self-organization?
- a. By removing titles for development team members.
 - b. By not allowing documentation.
 - c. By being a lightweight framework.
 - d. By preventing stakeholders from entering the development room.
 - e. By the development team deciding that work to do in a sprint

I selected: **A, C, E**

9. Which of the following might the scrum team discuss during a sprint retrospective?
- a. Method of communication.
 - b. The way the scrum team does sprint planning.
 - c. Skills needed to improve the development team's ability to deliver.
 - d. Its definition of done.
 - e. All of the above

I selected: **C**.

Correct answer: **E**

10. When is the implementation of a product backlog item considered complete?
- a. When all work in the sprint backlog related to the item is finished.
 - b. When QA reports that the item passes all acceptance criteria.
 - c. When the item has no work remaining in order to be potentially released.
 - d. Al the end of the sprint

I selected: **C**.

11. What does it mean for a development team to be cross functional?

- a. Developers on the development team work closely with business analysts architects developers and testers who are not on the team.
- b. The development team includes cross skilled individual who are able to contribute to do what is necessary to deliver an increment of software.
- c. The development team is a virtual team drawing for separate teams of business analysts, architects, developers and testers.
- d. The development team includes not only developers but also business analysts architects and testers

I selected: **B**.