

## Chapter 3 Question Distribution

Certified Tester Foundation Level question distribution					
Chapter 3		Learning Objectives (LO) - Öğrenme Amaçları	Unit - Ünite	Number of Questions per LO	Açıklama
1	FL-3.1.1	Recognize types of software work product that can be examined by the different static testing techniques	Static Testing Basics	Exactly ONE question based on either of these LOs is required.	Bu konuların herhangi birinden 1 tane soru gelecek
	FL-3.2.2	Recognize the different roles and responsibilities in a formal review			
3	FL-3.1.2	Use examples to describe the value of static testing	Static Testing Basics	Exactly THREE questions based on this set of 5 LOs are required.  Each question must cover a DIFFERENT LO.	Bu 5 konudan (veya LO) 3 tane soru gelecek. Yani diğer 2 konudan o sınavda soru gelmeyecek. Her soru farklı bir konu başlığını (LO) kapsamak zorunda.
	FL-3.1.3	Explain the difference between static and dynamic techniques, considering objectives, types of defects to be identified, and the role of these techniques within the software lifecycle	Static Testing Basics		
	FL-3.2.1	Summarize the activities of the work product review process	Review Process		
	FL-3.2.3	Explain the differences between different review types: informal review, walkthrough, technical review, and inspection	Review Process		
	FL-3.2.5	Explain the factors that contribute to a successful review	Review Process		
1	FL-3.2.4	Apply a review technique to a work product to find defects	Review Process	Exactly ONE question based on this LO is required.	Bu konudan 1 tane soru gelecek
5 Soru					

**NOT:** Bilgiler official/resmi dokümandan alınmıştır. / Dokümanda yer alan “Learning Objectives-Öğrenme Amaçları-Hedefleri” kavramı, tablonun bazı hücrelerinde “konu” şeklinde kullanılmıştır. / Kırmızı renkli konulardan bir adet soru gelmesi beklenmektedir. /

## DİKKAT!

Sorular cevaplanırken bazı hususlara dikkat etmek gerekmektedir.

Öncelikle soru cümlelerinde geçen ifadeler dikkatle okunmalı ve altı çizilmelidir.

Örneğin, “**main, the most, the highest, the best, prior, mostly, generally vd**” ifadeler hem soruya yaklaşımımızı hem de çözüm seçeneklerini etkilemektedir.

Sınavda diğer şıklara göre daha “**doğru, etkin, önemli, üstün**” olan şık işaretlenmelidir.

Bu tür sorularda soruda yer alan 4 adet şıkkın 3 adedi kişiyi yanıltabilecek bazı kelime/kavramlar içermektedir. Ancak bu cevapların bir yerinde tutarsızlıklar olacaktır. Adaydan istenen şıklar arasında bir sıralama (**öncelik/önemlilik/sağladığı katkı/kronolojik açısından**) yapmasıdır.

Ayrıca genelleme yapan, aşırı dışlayan veya kesinlik ifade eden kelimelere dikkat edilmelidir. Bu nedenle şıklarda yer alan “**always, all, never, every, prove**” gibi ifadeler şüpheyi yaklaştırmakta fayda vardır.

Genel olarak “**help, can, reduce, minimize, probability**” gibi ifadeler Syllabus ile daha uyumlu bir mantık taşımaktadır.

# 3.1.Static Testing Basics



3.1.1 Work Products that Can Be Examined by Static Testing

3.1.2 Benefits of Static Testing

3.1.3 Differences between Static and Dynamic Testing

## QUESTION-1

Which of the following BEST defines static techniques? [K1]

- A. Executing the software work product
- B. Manually examining the code or project documentation
- C. Automated analysis of the code or project documentation
- D. Manual examination and automated analysis of code or project documentation

**Answer: D**

**Explanation:**

## QUESTION-2

Which of the following are the typical defects found by static analysis tools?

- a. Variables that are never used.
  - b. Security vulnerabilities.
  - c. Poor performance.
  - d. Unreachable code.
  - e. Business processes not followed.
- 
- A. b, c and d are true; a and e are false
  - B. a is true; b, c, d and e are false
  - C. c, d and e are true; a and b are false
  - D. a, b and d are true; c and e are false

**Answer: D**

**Explanation:**

### QUESTION-3

What do static analysis tools analyze?

- A. Design
- B. Test cases
- C. Requirements
- D. Program code

**Answer: D**

**Explanation:**

### QUESTION-4

Which of the following is most likely to be a benefit of using static techniques?

- A. Fewer performance defects.
- B. Productivity improvements in the development process.
- C. More efficient regression testing.
- D. Quick return on investment in static analysis tools.

**Answer: B**

**Explanation:**

Although the other options might be seen as benefits they are not amongst the most likely benefits. Option (B) is the benefit that is most likely to be realized.

### QUESTION-5

Which of the following are static techniques?

- A. Walkthrough.
- B. State transition testing.
- C. Decision table testing.
- D. Statement testing.

**Answer: A**

**Explanation:**

Options (B), (C) and (D) are all dynamic test techniques.

#### QUESTION-6

Which of the following would typically be identified using static analysis by tools?

- A. Spelling mistake on an error message
- B. A potential infinite loop (code)
- C. Memory leakage
- D. A variable set to the wrong value

**Answer: B**

**Explanation:**

#### QUESTION-7

Which of the following type of defect would NOT be typically found by using a static analysis tool?

- A. A variable is defined but is then not used
- B. A variable is used in a calculation before it is defined
- C. A variable has the wrong numeric value passed into it
- D. A variable is used but not declared

**Answer: C**

**Explanation:**

#### QUESTION-8

Which of the following is a defect that is more likely to be found by a static analysis tool than by other testing techniques?

- A. Omission of a major requirement
- B. Inadequate decision coverage
- C. Component memory leakage
- D. Variables that are not used improperly declared

**Answer: D**

**Explanation:**

#### QUESTION-9

Which of the following defects-can NOT be found by static analysis tools?

- A. Infinite loops
- B. Wrong business rules
- C. Syntax errors of the code
- D. Undefined variables

**Answer: B**

**Explanation:**

#### QUESTION-10

Which of the following tools can be used by developers, testers and quality assurance personnel in looking for defects prior to dynamic testing?

- A. Static Analysis tool
- B. Modeling tool
- C. Test data preparation tool
- D. Configuration management tool

**Answer: A**

**Explanation:**

#### QUESTION-11

Which of the following is an example of Static testing?

- A. Calculating path coverage using tools
- B. Performance testing
- C. Requirements review
- D. Usability testing

**Answer: C**

**Explanation:**

### QUESTION-12

Which of the following defect types are LEAST likely to be discovered when using static analysis tools?

- A. Variables that are never used
- B. Coding standard violations
- C. Memory leaks
- D. Uncalled functions and procedures

**Answer: C**

**Explanation:**

### QUESTION-13

What is static analysis?

- A. The decision between using white or black box test techniques.
- B. Executing software to validate the most common path through the code.
- C. A technique to find defects in software source code and software models, performed without executing code.
- D. It is a testing technique used during system testing.

**Answer: C**

**Explanation:**

### QUESTION-14

What is the value of static code analysis?

- A. Detection of failures not easily found by other types of testing
- B. Early defect detection
- C. Detection of suspicious operations caused by deviations from regulations
- D. Detect deviations in standards by executing the source code

**Answer: B**

**Explanation:**

#### QUESTION-15

Which of the following are the typical defects found by static analysis tools?

- a) Variables that are never used.
- b) Security vulnerabilities.
- c) Poor performance.
- d) Unreachable code.
- e) Business processes not followed.

- A. b, c and d are true; a and e are false
- B. a is true; b, c, d and e are false
- C. c, d and e are true; a and b are false
- D. a, b and d are true; c and e are false

**Answer: D**

**Explanation:**

#### QUESTION-16

Which of the following defects would NORMALLY be identified by a static analysis tool?

- A. The response time for the search function exceeded the agreed limit
- B. The design specification had many grammatical errors
- C. The component code had variables that were used but had not been declared
- D. The component was found to be the source of the memory leak

**Answer: C**

**Explanation:**

#### QUESTION-17

What test roles (or parts in the testing process) is a developer most likely to perform?

- (i) Executing component integration tests.



- (ii) Static analysis.
- (iii) Setting up the test environment.
- (iv) Deciding how much testing should be automated.

- A. (i) and (ii)
- B. (i) and (iv)
- C. (ii) and (iii)
- D. (iii) and (iv)

**Answer: A**

**Explanation:**

(i) Executing component integration tests is usually done by developers. Developers are usually responsible for unit and component integration testing. Independent testing usually follows at system and acceptance test levels.

(ii) Static analysis is usually done by developers because: it requires an understanding of the code and therefore the person doing this needs skills in the programming language; and it can be done as soon as the code is written. Therefore it is quick and effective for the developer to do it. The risk of a lack of test independence can be mitigated by performing independent system and acceptance testing.

(iii) Setting up the test environment is an activity typically performed by a tester. It may require support from developers and staff from other departments and on some occasions environments could be set up by developers. However, it is a task that could be done by a tester rather than a developer.

(iv) Deciding how much testing should be automated is typically a decision made by the test leader, who will consult other staff in the decision-making process. Developers may be involved and their skills may be required to automate some tests. However, the decision on how much to automate should not be made by developers.

#### QUESTION-18

What benefits do static analysis tools have over test execution tools?

- A. Static analysis tools find defects earlier in the life cycle.
- B. Static analysis tools can be used before code is written.
- C. Static analysis tools test that the delivered code meets business requirements.
- D. Static analysis tools are particularly effective for regression testing.

**Answer: A**

**Explanation:**

### QUESTION-19

What is static analysis?

- A. The decision between using white or black box test techniques.
- B. Executing software to validate the most common path through the code.
- C. A technique to find defects in software source code and software models, performed without executing code.
- D. It is a testing technique used during system testing.

**Answer: C**

**Explanation:**

### QUESTION-20

What is the value of static code analysis?

- A. Detection of failures not easily found by other types of testing
- B. Early defect detection
- C. Detection of suspicious operations caused by deviations from regulations
- D. Detect deviations in standards by executing the source code

**Answer: B**

**Explanation:**

### QUESTION-21

Which of the following correctly states a limitation in the use of static analysis tools? [K1]

- A. Static analysis tools can be applied to new code but cannot be applied to existing code
- B. Static analysis tools can be used to enforce coding standards
- C. Static analysis tools always generate large numbers of warning messages when applied to new code, even if the code meets coding standards
- D. Static analysis tools do not generate warning messages when applied to existing code

**Answer: B**

**Explanation:**

## 3.2.Review Process

3.2.1 Work Product Review Process

3.2.2 Roles and responsibilities in a formal review

3.2.3 Review Types

3.2.4 Applying Review Techniques

3.2.5 Success Factors for Reviews

### QUESTION-22

Which of the following is a role of a formal review?

- A. Adjudicator
- B. Facilitator
- C. Governor
- D. Corrector

**Answer: B**

**Explanation:**

### QUESTION-23

One of the roles in a review is that of moderator, which of the following best describes this role?

- A. Plans the review, runs the review meeting and ensures that follow-up activities are completed.
- B. Allocates time in the plan, decides which reviews will take place and that the benefits are delivered.
- C. Writes the document to be reviewed, agrees that the document can be reviewed, and updates the document with any changes.
- D. Documents all issues raised in the review meeting, records problems and open points.

**Answer: A**

**Explanation:**

### QUESTION-24

Which one of the following roles is typically used in a review?

- A. Champion.
- B. Author.
- C. Project sponsor.
- D. Custodian.

**Answer: B**

**Explanation:**

The Author is the only role that is typically used in a review.

A Champion might sponsor the review process but is not a defined role within an actual review; a Project Sponsor, if technically competent, might be asked to play a defined role within the review process, but whilst using that role they will not be a Project Sponsor; finally, a Custodian might ensure the results are stored safely but would not be involved in the actual review itself.

#### QUESTION-25

Which of the following statements are correct for walkthroughs?

- (i) Often led by the author.
- (ii) Documented and defined results.
- (iii) All participants have defined roles.
- (iv) Used to aid learning.
- (v) Main purpose is to find defects.

- A. (i) and (v) are correct.
- B. (ii) and (iii) are correct.
- C. (i) and (iv) are correct.
- D. (iii) and (iv) are correct.

**Answer: C**

**Explanation:**

#### QUESTION-26

Which of the following statements are true?

- (i) Defects are likely to be found earlier in the development process by using reviews rather than static analysis.
- (ii) Walkthroughs require code but static analysis does not require code.
- (iii) Informal reviews can be performed on code and specifications.

- (iv) Dynamic techniques are generally used before static techniques.
- (v) Dynamic techniques can only be used after code is ready to be executed.

- A. (i), (ii), (vi).
- B. (ii), (iii), (v).
- C. (i), (iv), (v).
- D. (i), (iii), (v).

**Answer: D**

**Explanation:**

The other answers are incorrect because:

- (ii) Walkthroughs do not require code and static analysis does require code.
- (iv) Static techniques do not execute the code and therefore can be run before and after the code is ready for execution.

#### QUESTION-27

Which of the following is most likely to be performed by developers?

- A. Technical review of a functional specification.
- B. Walkthrough of a requirements document.
- C. Informal review of a program specification.
- D. Static analysis of a software model.

**Answer: D**

**Explanation:**

Static analysis is done almost exclusively by developers. The other review types would be performed using a combination of developers, testers and other interested stakeholders.

#### QUESTION-28

Which from the following list are typically found to enable the review process to be successful?

- a) Each review has clear defined objectives
- b) The lower the number of defects, the better the review process
- c) The right people for the review objective are involved
- d) There is an emphasis on learning and process improvement
- e) Management are not involved in the process at all
- f) Checklists should not be used, as these slow down the process

g) Defects found are welcomed and expressed objectively

- A. a, f and g.
- B. b, c and f.
- C. a, c and d.
- D. d, e and g.

**Answer: C**

**Explanation:**

#### QUESTION-29

When considering the roles of test leader and tester, which of the following tasks would NOT typically be performed by a tester?

- A. Prepare and acquire the test data
- B. Set up and check the test environment
- C. Write test summary reports
- D. Review tests developed by others

**Answer: D**

**Explanation:**

#### QUESTION-30

What of the following statements regarding walkthrough are NOT true?

- A. A walkthrough is led by a moderator and requires pre-meeting preparation and post meeting follow up
- B. A walkthrough may take the form of scenarios, dry runs and peer group review
- C. The purpose of a walkthrough is to establish common understanding of a document and to find possible defects in it
- D. Pre-meeting preparation, documentation and distribution of results are optional for a walkthrough

**Answer: A**

**Explanation:**

#### QUESTION-31

Which type of review has the following main purposes: gaining consensus, discussing, making decisions, evaluating alternatives, finding defects, solving technical problems and checking conformance to specifications, plans, regulations, and standards?

- A. Technical Review
- B. Inspection
- C. Walkthrough
- D. Informal review

**Answer: A**

**Explanation:**

#### QUESTION-32

Which of the following describes the main activities of a formal review?

- A. Initiation, backtracking, individual review, issue communication and analysis rework, follow-up.
- B. Planning, individual review, issue communication and analysis, rework, closure, follow-up.
- C. Planning, initiate review, individual review, issue communication and analysis, fixing and reporting.
- D. Individual review, issue communication and analysis, rework, closure, follow-up, root cause analysis.

**Answer: C**

**Explanation:**

#### QUESTION-33

Which of the following is a review process activity?

- A. Individual preparation
- B. Writing test conditions
- C. Developing a test plan
- D. Executing test scripts

**Answer: A**

**Explanation:**

#### QUESTION-34

Which characteristics BEST describe a walkthrough?

- A. Documented, includes peers and experts
- B. Formal process collects metrics
- C. Defined roles, led by trained moderator
- D. Led by the author, may be documented

**Answer: D**

**Explanation:**

#### QUESTION-35

Which of the following software work products would NOT TYPICALLY be examined using static analysis techniques?

- a) Design specification.
- b) Component code.
- c) Software model.
- d) Test procedure.
- e) Non-functional requirements specification.

- A. a, c and d
- B. a, d and e
- C. b, c and d
- D. a, b and e

**Answer: B**

**Explanation:**

#### QUESTION-36

Which of the following are key success factors to the review process?



- A. Review time is allowed in the test execution schedule, process improvement is recognised in the follow up meeting and the objective is always to find defects
- B. Each review has a clear objective, the right people are involved, training is provided in the review technique and management fully support the process
- C. Participants are trained, all review meetings are time boxed and moderators are Project managers
- D. Every team member will be involved, all review techniques are used on every work product and test managers control the review process

**Answer: B**

**Explanation:**

#### QUESTION-37

In a review meeting a moderator is a person who:

- A. Takes minutes of the meeting
- B. Mediates between people
- C. Takes telephone calls
- D. Writes the documents to be reviewed

**Answer: B**

**Explanation:**

#### QUESTION-38

Which type of review has the following main purposes: discussing, making decisions, evaluating alternatives, finding defects, solving technical problems and checking conformance to specifications, plans, regulations, and standards?

- A. Technical Review
- B. Inspection
- C. Walkthrough
- D. Informal review

**Answer: A**

**Explanation:**

#### QUESTION-39

Which of the following test activities are more likely to be undertaken by management rather than a reviewer (tester)?

- a) Creates test specifications.
- b) Assigns staff, budget, and time
- c) Decides on the execution of reviews
- d) Prepares and acquires test data.

- A. c and d
- B. a and b
- C. b and d
- D. b and c

**Answer: D**

**Explanation:**

#### QUESTION-40

Which from the following list are typically found to enable the review process to be successful?

- a. Each review has clear defined objectives
- b. The lower the number of defects, the better the review process
- c. The right people for the review objective are involved
- d. There is an emphasis on learning and process improvement
- e. Management are not involved in the process at all
- f. Checklists should not be used, as these slow down the process
- g. Defects found are welcomed and expressed objectively

- A. a, f and g.
- B. b, c and f.
- C. a, c and d.
- D. d, e and g.

**Answer: C**

**Explanation:**