Answer references for Exam INF3121 / INF4121 2017 – 2017

Del 1 -Spørsmål 1

Consider the following list of test process activities:

1 Analysis and design
2 Test closure activities
3 Evaluating exit criteria and reporting
4 Planning and control
5 Implementation and execution

Which of the following places these in their logical sequence?

Select an alternative:

- ○ 4, 1, 5, 3, 2
- ○ 1, 2, 3, 4, 5
- ○ 4, 1, 5, 2, 3
- ○ 1, 4, 5, 3, 2

Del 1 - spørsmål 2

According to the ISTQB Glossary, which of the following is a test type?

Select an alternative:

- ○ Acceptance testing
- ○ Functional testing
- ○ Component testing
- ○ System testing

Del 1 - spørsmål 3

Complete the following sentence:

A regression test…

Select an alternative:

- ○ … will always be automated.
- ○ … will check unchanged areas of the software to see if they have been affected.
- ○ … is only run once.
- ○ … will check changed areas of the software to see if they have been affected.

Del 1 - spørsmål 4

Which statement about testing is true?

Select an alternative:

- Testing should start after the code is written so that we have a system with which to work.
- Testing is most economically done at the end of the life cycle.
- Testing can only be done by an independent test team.
- Testing should start as early as possible in the life cycle.

Del 1 - spørsmål 5

What is the main difference between a *walkthrough* and an *inspection*?

Select an alternative:

- A walkthrough is led by the author, while an inspection is led by a trained moderator.
- An inspection has a trained leader, while a walkthrough has no leader.
- An inspection is led by the authors, while a walkthrough is led by a trained moderator.
- Authors are not present during inspections, while they are during walkthroughs.

Del 1 - spørsmål 6

What is the best description of static analysis?

Select an alternative:

- The use of black-box testing
- The analysis of batch programs
- The analysis of program code or other software artifacts
- The reviewing of test plans

Del 1 - spørsmål 7

Which of the following could be used to assess the coverage achieved for structure-based (white-box) test techniques?

1 Decision outcomes exercised
2 Partitions exercised
3 Boundaries exercised
4 Conditions or multiple conditions exercised
5 Statements exercised

Select an alternative:

- 1, 4, 5
- 2, 3, 5
- 1, 2, 4
- 2, 3, 4

Del 1 - spørsmål 8

If the temperature falls below 18 degrees, the heating is switched on. When the temperature reaches 21 degrees, the heating is switched off. What is the minimum set of test input values to cover all valid *equivalence partitions*?

Select an alternative:

- 16 and 26 grader
- 17, 18, 20 and 21 grader
- 15, 19 and 25 grader
- 18, 20 and 22 grader

Del 1 - spørsmål 9

What does it mean if a set of tests has achieved 90% *statement coverage*?

Select an alternative:

- 9 out of 10 decision outcomes have been exercised by this set of tests.
- 9 out of 10 requirements statements about the software are correct.
- 9 out of 10 statements have been exercised by this set of tests.
- 9 out of 10 tests have been run on this modul of the software.

Del 1 - spørsmål 10

Which two specification-based (*black-Box*) testing techniques are most closely related to each other?

Select an alternative:

- Decision tables and state transition testing
- Equivalence partitioning and boundary value analysis
- Decision tables and boundary value analysis
- Equivalence partitioning and state transition testing

Del 1 - spørsmål 11

Which of the following is an advantage of independent testing?

Select an alternative:

- The others on a project can pressure the independent testers to accelerate testing at the end of the schedule.
- Programmers can stop worrying about the quality of their work and focus on producing more code.
- Independent testers don't have to spend time communicating with the project team.
- Independent testers sometimes question the assumptions behind requirements, designs and implementations.

Del 1 - spørsmål 12

Which of the following metrics would be most useful to monitor during test execution?

Select an alternative:

- ○ Percentage of requirements for which a test has been written.

- ○ Percentage of test cases written.

- ○ Number of test environments remaining to be configured.

- ● Number of defects found and fixed.

Del 1 - spørsmål 13

According to the ISTQB Glossary, what do we call a document that describes any event that occurred during testing which requires further investigation?

Select an alternative:

- ○ A test summary report

- ● An incident report

- ● A defect report

- ○ A bug report

(In the last edition of the textbook, an incident report is replaced by the a defect report.)

Del 1 - spørsmål 14

Which of the following are benefits and which are risks of using tools to support testing?

1 Over-reliance on the tool
2 Greater consistency and repeatability
3 Objective assessment
4 Unrealistic expectations
5 Underestimating the effort required to maintain the test assets generated by the tool
6 Ease of access to information about tests or testing
7 Repetitive work is reduced

Select an alternative:

- ○ Benefits: 2, 3, 5 and 6. Risks: 1, 4 and 7.

- ○ Benefits: 1, 2, 3 and 7. Risks: 4, 5 and 6.

- ● Benefits: 2, 3, 6 and 7. Risks: 1, 4 and 5.

- ○ Benefits: 3, 4, 6 and 7. Risks: 1, 2 and 5.

Del 1 - spørsmål 15

Consider the following types of Tools:

1 Test management tools
2 Static analysis tools
3 Modeling tools
4 Dynamic analysis tools
5 Performance testing tools

Which of the following of these tools is most likely to be used by Developers?

Select an alternative:

○ 3, 4 and 5

○ 1, 2 and 5

○ 2, 3 and 4

○ 1, 4, and 5

Part 2 - References to the textbook

Question 1 – 2 point.
Ref: - Chapter 1.3.3 - *Early testing*

Question 2 – 6 points
Ref. Chapter 1.3: *Seven testing principles*

Question 3 – 4 points
Ref: Chapter 2.3: *Test types.*

Question 4 – 4 points
Ref. Chapter 3.1: *Static technique and the test process* (**Fourth edition: Chapter 3.1.3**)

Question 5 – 2 points
Ref: Chapter 3.2: *Review process* and **Chapter 3.3** *Static analysis by tools*

Question 6 – 3 point
Ref. Chapter 6.1.7 – *Tools for performance and monitoring* (**Fourth edition: Chapter 6.1.1, page 213**)

Question 7 – 4 points
Ref. Chapter 6.2.3 - *Test execution tools* (**Fourth edition: Chapter 6.1.1, page 210**)

Question 8 – 2 points
Ref. Chapter 5.5.1 – *Risk and levels of risk*

Question 9 – 3 points
Ref. Chapter 6.1 – *Types of tools*

Question 10 - 2 points
Ref. Chapter 4.5 – *Experience-based techniques* (**Fourth edition: Chapter 4.4)**

Part 3 - Use of test techniques (20 points)

Case 1 – State transition testing – 10 points
Ref. Chapter 4.3.3 – *State transition testing* (**Fourth edition: Chapter 4.2.4**)
Ref. Exercise*: 4.17 and 7.35*

Case 2 - Decision table testing – 10 points
Ref. Chapter 4.3.2 – *Decision table testing* (**Fourth edition: Chapter 4.2.3**)

Part 4 - essay – 20 points
Ref. Chapter 6.2 – *Effective use of tools: Potential benefits and risks* (**Fourth edition: Chapter 6.1.2**)
Ref. Chapter 6.3 – *Introducing a tool in an organization* (**Fourth edition: Chapter 6.2**)