

# **Testing** throughout the **software life cycle**

**Software Testing: INF3121 / INF4121**

# Summary: Week 2

## Software development **models**

Sequential / Iterative-Incremental / Testing within a life cycle

## Test **levels**

Component (Unit) / Integration / System / Acceptance

## Test **types**

Functional / Non-functional / Software structure / Related to changes

## **Maintenance testing**



# Part I: Close-ended questions

# Question 1

Which are **good practices** for **testing** within the **development life cycle**?

- a. Early test analysis and design
- b. Different test levels are defined with specific objectives
- c. Testers will start to get involved as soon as coding is done
- d. A and B above



# Question 2

Which option best describes **objectives** for **test levels** with a **life cycle model**?

- a. Objectives should be generic for any test level
- b. Objectives are the same for each test level
- c. Objectives of a test level don't need to be defined in advance
- d. Each level has objectives specific to that level



# Question 3

Which of the following is a **non-functional quality characteristic**?

- a. Feasibility
- b. Usability
- c. Maintenance
- d. Regression



# Question 4

Which of these is a **functional test**?

- a. Measuring response time on an on-line booking system
- b. Checking the effect of high volumes of traffic in a call-centre system
- c. Checking the on-line bookings screen information and the database contents against the information on the letter to the customers
- d. Checking how easy the system is to use



# Question 5

Which of the following is **true** regarding the process of **fixing emergency changes**?

- a. There is no time to test the change before it goes live, only the best developers should do this work and should not involve testers as they slow down the process
- b. Just run the retest of the defect actually fixed
- c. Always run a full regression test of the whole system in case other parts of the system have been adversely affected
- d. Retest the changed area and then use risk assessment to decide on a reasonable subset of the whole regression test to run in case other parts of the system have been adversely affected



# Question 6

## A regression test ...

- a. Is only run once
- b. Will always be automated
- c. Will check unchanged areas of the software to see if they have been affected
- d. Will check changed areas of the software to see if they have been affected



# Question 7

## **Non-functional testing** includes:

- a. Testing to see where the system does not function correctly
- b. Testing the quality attributes of the system including reliability and usability
- c. Gaining user approval for the system
- d. Testing a system feature using only the software require for that function

# Question 8

\_\_\_\_\_ testing is performed by **customers** at their **own site**



# Question 9

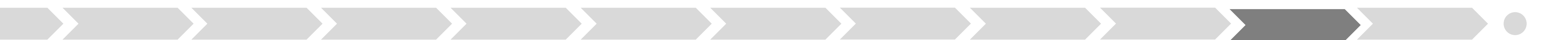
Pair the following **test levels** with their **description**

1. Unit level	A. Tests the behavior of the whole system
2. Integration level	B. Performed by customers
3. System level	C. Tests any module or object separately testable
4. Acceptance level	D. Tests the interactions of the interfaces of the system

# Question 10

**Acceptance testing is not the responsibility of the development team. It is the responsibility of the customers, but the development team can assist in the process.**

- a. True
- b. False



# **Part II: Exercises and Open-ended questions**

# Exercise: Different Types of Testing

Go to [www.ikea.com/no/no/](http://www.ikea.com/no/no/)

Give **examples** of possible ...

- a. Unit tests
- b. Integration tests
- c. System tests



# Open-Ended Questions

Why do you think we need to **test** at **integration** level **top-down** or **bottom-up** rather than **big-bang**?

Why is **acceptance** testing **important**?

Why do you think it is **important** to **test on-site**?





# The End

## Assignments

2-3 people in each group

Alt. I: Register as an individual. We form the groups

Alt. II: Register the entire group at once.

## Next week:

Static test techniques



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