Week 3 Practice Quiz

1. The unit testing plan that is generated is always a formal document.
   - True
   - False

   {The unit testing plan is often not a formal document. It is a plan put in place by the developer while working on the project.}

2. Which of the following is the kind of test that determines whether or not you built the correct thing for the customer?
   - Customer Acceptance Test
   - Unit Testing Plan
   - Unit Test
   - System Validation Test

   {Customer testing is done between the developer and the customer. It ensures the final product is acceptable to the customer.}

3. System validation testing is when the system is tested for error prone constructs and low level functionality assurances.
   - True
   - False *{You are correct; system validation testing is when the system is tested for high level behaviour and non-functional performance. Unit testing is when the system is tested (usually by the developer) for error prone constructs and low level functionality.}*

4. Which of the following is NOT an important component of a test plan according to the Quality Assurance Institute?
   - Scope
   - Entry and Exit Conditions
   - Resources and Testing Environment
   - Reliability
   - Schedule

   {Reliability is one thing that is being tested, not a component of a test plan. The four most important components as stated in the lesson are scope, schedule, resources/testing environment, and entry/exit conditions.}

5. Which of the following traces test cases back to requirements?
   - Domain Report
   - Domain Expert
   - Traceability Report
   - Unit Testing Plan

Importance of a Good Test Plan

1. Which of the following is **not true** about a traceability (requirements) matrix.
   - It helps find untested requirements
   - It will list any missing requirements
   - It helps identify test cases that don't tie to requirements.

2. When considering concerns or risks of test planning, it's important to take preventative action when possible.

   - True
   - False

   {Yes: if you know there are deficiencies in the test plan, they should be addressed. For example, if requirements are incomplete or there is not management support for test, it is better to fix these issues early rather than late.}

3. It is normal to accept requirements with a 'to-be-determined' in them.

   - True
   - False

   {Correct: requirements with TBDs can't really be tested because we do not know how the system is expected to respond.}

4. Testing is the only way to locate bugs in a system.
   - True
   - False

5. There is always pressure on _____ to prove a product is not ready for release (especially in the Waterfall Method)

   - Customer/User
   - Domain Expert
   - Testers
   - Managers

Stages of Software Testing Process

1. Unit testing is usually white box testing done by the developer on a small piece of code (a function or class).

   - True
   - False

2. Which of these should NOT be included in unit testing?
   - Testing array bounds
   - Test loop boundaries for off-by-one errors
   - Error prone constructs
   - Module integration testing

3. Design Verification Testing has two aspects: Integration testing and Functional testing.
   - True
   - False

   {Integration testing checks whether the modules work together, and functional testing checks whether they do something useful.}

4. Testing modules to ensure they work together properly occurs at which stage of software testing process?

   - Unit Testing
   - Design Verification Testing
   - System Validation Testing
   - Functional Testing

5. System validation testing occurs once the full system is complete.
   - True
   - False

6. System validation testing will test the system for quality of behavior delivery on many aspects. Which of the following is not one of those aspects?
   - Usability
   - Portability
   - Scalability
   - Performance
   - Loop Invariants
   - Security

Test (Status) Reports

1. Which of the following is NOT part of the test (status) report.
   - Open defects
   - Test case code
   - what was tested
   - What was not tested

2. The only test report is the final report and is sent only when all testing is complete.
   - True
   - False

3. Test (status) reports are important because:

   - Allows management to better manage risk.
   - Allows marketing to provide to the customers updates and manage customer expectations.
   - Assists in process improvement through post-mortem evaluations.
   - All of the above

4. Testing is _____ but not _____ from development.

   - Independent; Isolated
   - Isolated; Independent

Risk Based Test Planning

1. The act of reducing risk is known as:
   - Risk mitigation
   - Risk analysis
   - Risk testing
   - Risk equation

2. The risk equation is:
   - risk = impact / likelihood
   - risk = likelihood / impact
   - risk = impact * likelihood
   - risk = likelihood + impact

3. The amount of loss management is willing to accept is known as:
   - Risk mitigation
   - Risk appetite
   - Risk impact
   - Risk equation

4. In terms of risk impact, depth of impact refers to:
   - Number of people or systems affected
   - Cost of the damage
   - Severity of damage
   - Size of module

The depth of impact is a measure of the severity of damage as well as the availability of workarounds where breadth refers to the number of people/systems affected and the cost of the damage done.

5. When considering risk, it is important to consider categories of impact. Which of the following is NOT given as an example in the lecture slides.
   - Reputation
   - Customer/User base
   - Motivation

- Financial
- Lives

6. Asking the question: What can you do to control (reduce) the risk? is an example of:
   - Risk analysis
   - Risk testing
   - Risk Impact
   - Risk mitigation
   - Risk Appetite

7. When risk avoidance fails, the best thing to do is to test features with the highest impact and the features that are most likely to fail.
   - True
   - False

Software Defects Report

1. Only half of testing efforts are spent on actual testing:
   - True
   - False

2. The stages in software defect life cycles include all of the following **except for one**. Choose the incorrect stage in the list below:
   - Analyze Report
   - Track status
   - Retest bug
   - Close bug
   - Ignore the bug

   Correct It seems quite unlikely that a stage in the process of handling a defect would be to ignore it. It may be the result of our analysis (e.g., we decide that though it is a bug, we won't do anything about that), but isn't a stage in every defect lifecycle.

Software **Defect** Reports: Analysis

1. Part of analysis is figuring out where the fault of the defect lies. The fault could lie with the:
   - Test
   - Tester
   - Product
   - All of the above

2. Reproducibility and repeatability are the same thing when it comes to defects.
   - True
   - False

3. Not all defects are created equal.
   - True
   - False

Software Defect Reports: Reporting

1. The report phase consists of four main steps. Which of the following is **not one** of those steps?
   - Let developers decide whether to report defect
   - Ensure defect is not a duplicate
   - Make sure defect gets fixed
   - Enter defect into the system
   - Talk with developers

2. What are the characteristics of an effective defect report?
   - Numbered or ID
   - Simple
   - Written
   - Complete
   - Understandable
   - All of the above

3. You should always include the minimum number of steps to reproduce the defect in a defect report.
   - True
   - False

Software Defect Reports: Report Content

1. The software defect report content consists of six main components. Which of the following is not one of those components?

   - Identification Information
   - Description of the problem
   - Status Indicator
   - Comments
   - Misc Information
   - Supporting Information
   - Associated defect reports

2. Which of the following components would contain a defect identification number?

   - Identification Information
   - Description of the problem
   - Status Indicator
   - Comments
   - Misc Information
   - Supporting Information

3. Which of the following components would contain an overview of the problem along with what you did and the results of that action?

   - Identification Information
   - Description of the problem
   - Status Indicator
   - Comments
   - Misc Information
   - Supporting Information

4. Assume that you are writing a defect report and this particular defect is known to have an impact of medium severity. Which component would contain this information?

    - Identification Information
    - Description of the problem
    - Status Indicator
    - Comments
    - Misc Information
    - Supporting Information

5. Severity and priority are essentially the same in terms of status indication.
    - True
    - False

6. The best defect reports have new and ingenious introductions of terminology and abbreviations.
    - True
    - False

7. Assume that there is a defect that is found to be a problem, but you can essentially ignore it. Which severity level should it have?

    - High
    - Medium
    - Low
    - Trivial

8. Let's say you are working on an unmanned aerial vehicle and a defect is found. This defect happens only occasionally, but if it does the vehicle would come crashing out of the sky onto an unsuspecting population killing many. What severity level should this defect be given?

    - High
    - Medium
    - Low
    - Trivial

9. Assume that a particular low-severity defect is such that by fixing it, it will cause many more problems to come up. What final state should this defect be given?

    - Not repeatable
    - Do not fix
    - Duplicate
    - Not a problem
    - Deferred

10. If there is a relatively easy workaround to a problem, STATE IT in the defect report.
    - True
    - False

Software Defect Reports: Track, Retest, and Close

1. When it comes to tracking defects, the most important aspect is to have a process and follow it.

   - True
   - False

2. Which of the following is not a conclusion reached by the retesting phase?

   - Problem fixed
   - Problem is insurmountable
   - Problem remains unchanged
   - Problem is replaced with a new problem

3. Testing and verification notes belong to which of the following categories?

   - Track
   - Retest
   - Close