ISTQB Foundation Level Cheat Sheet

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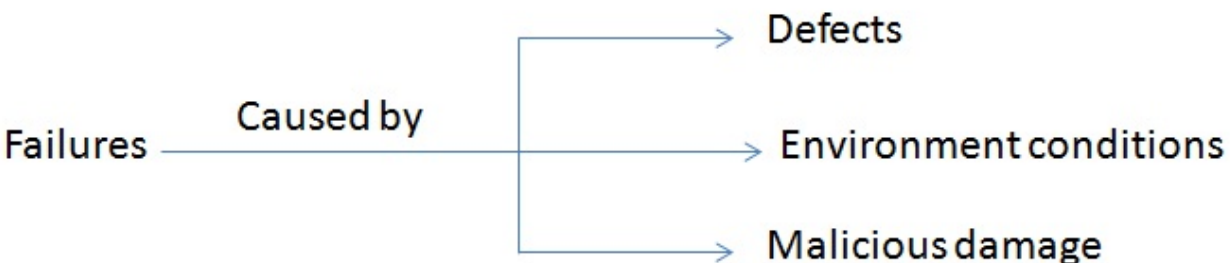
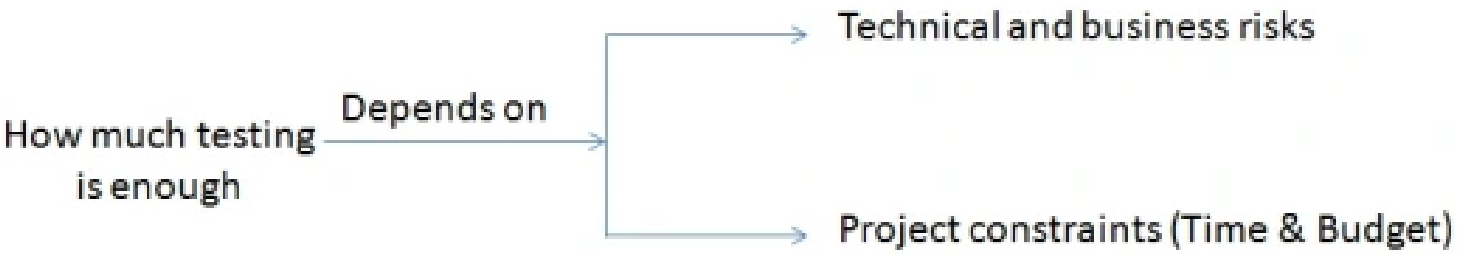
Chapter 1 - Fundamentals of testing

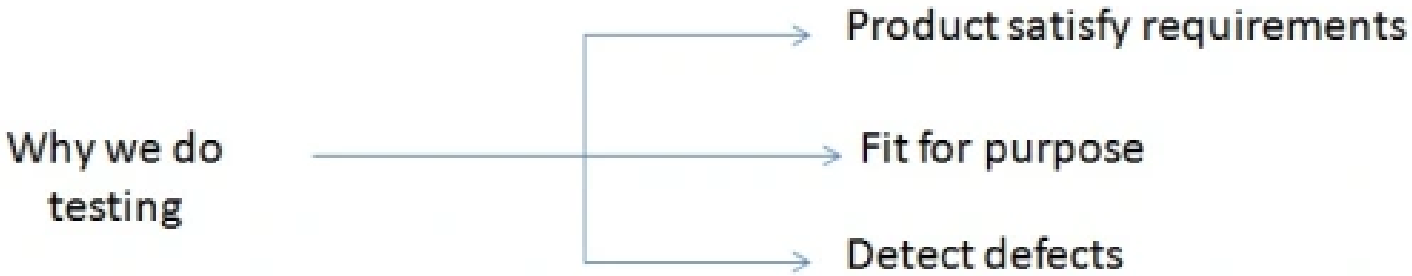
- Risk has an impact and probability
- Origins of defects/bugs/faults are errors/mistakes
- Not all defects cause failure



Elements of fundamental test process:

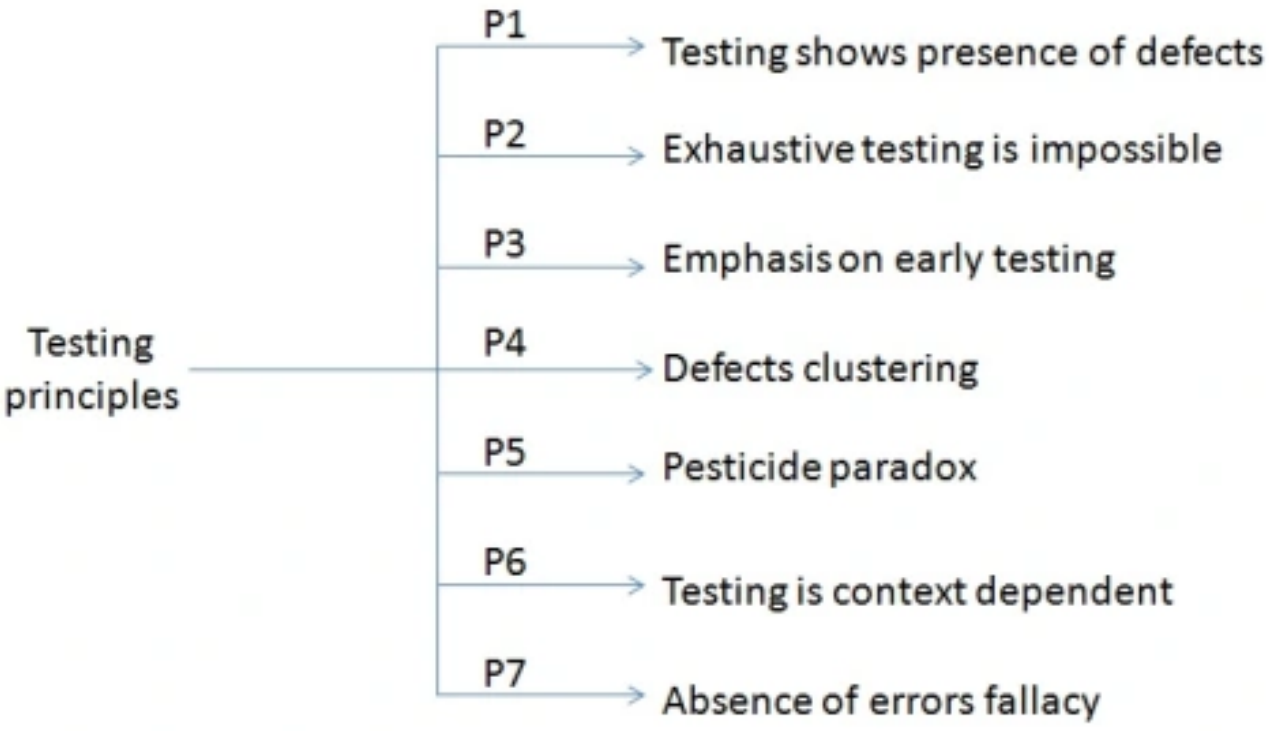
- Test planning and control
- Test analysis and design
- Test implementation and execution – Creation of test suites(logical collection of cases)
- Evaluating exit criteria and reporting
- Test closure activities



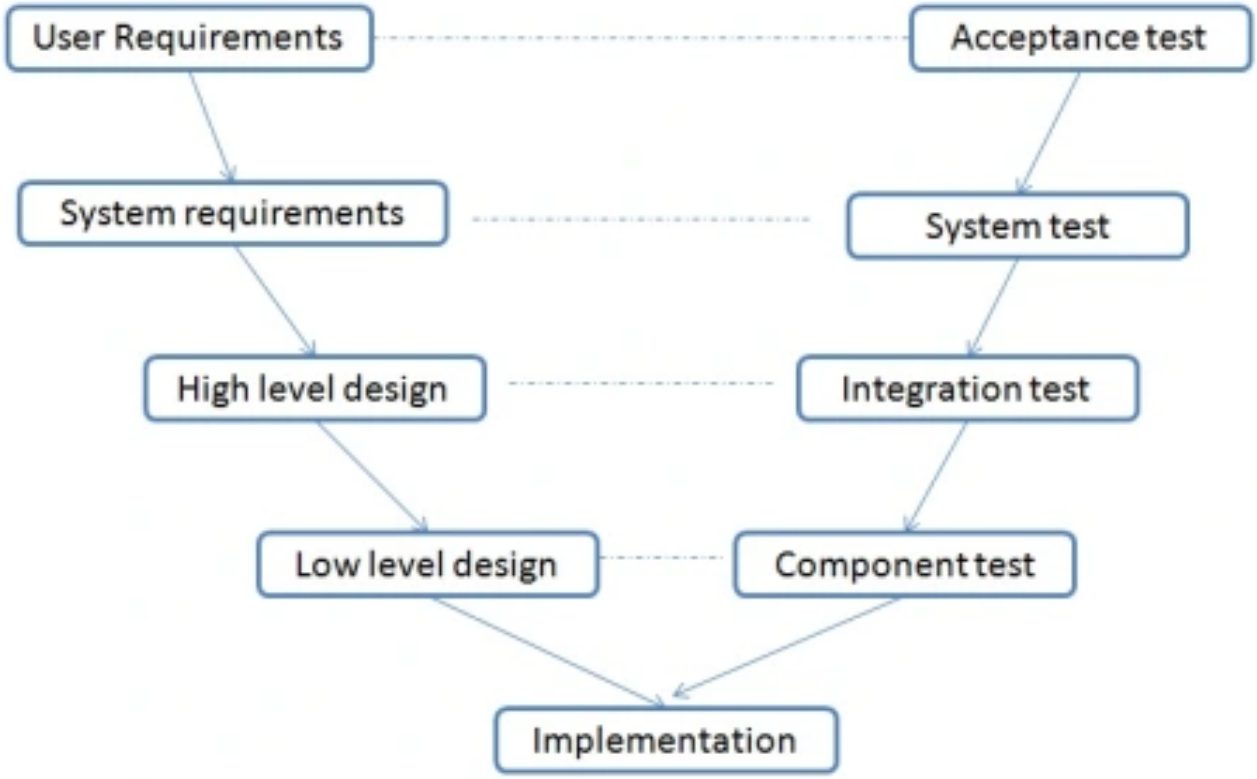


Best practices while reporting defects:

1. Communicate findings in a neutral, fact-focused way. Don’t criticize.
2. Be pessimistic and start with collaborations rather than battles.

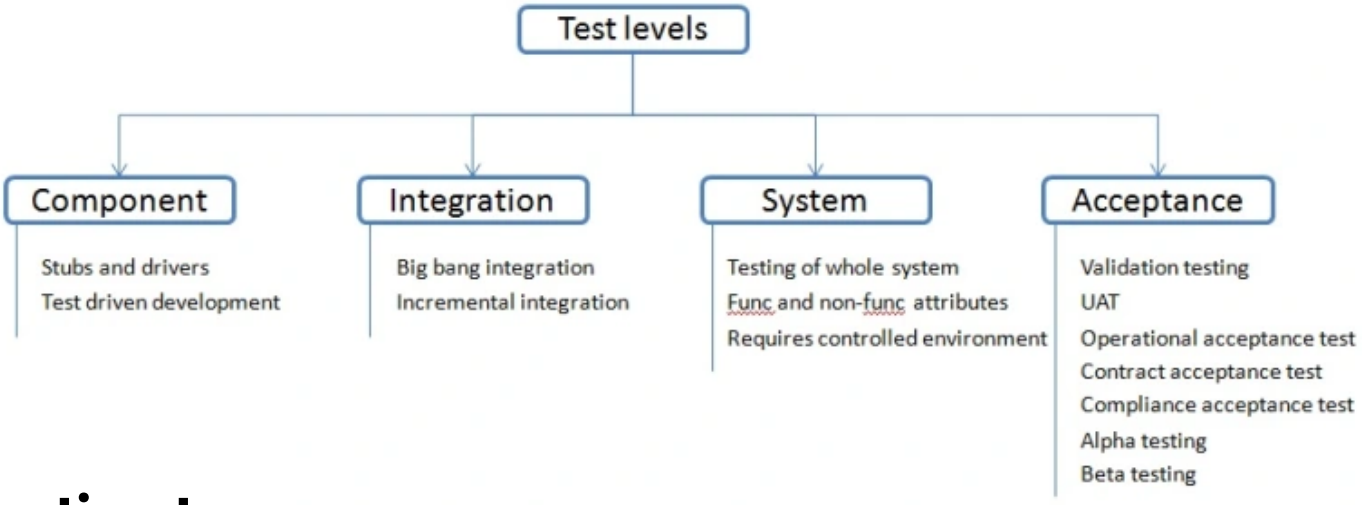


Chapter 2 – Testing throughout the software test cycle



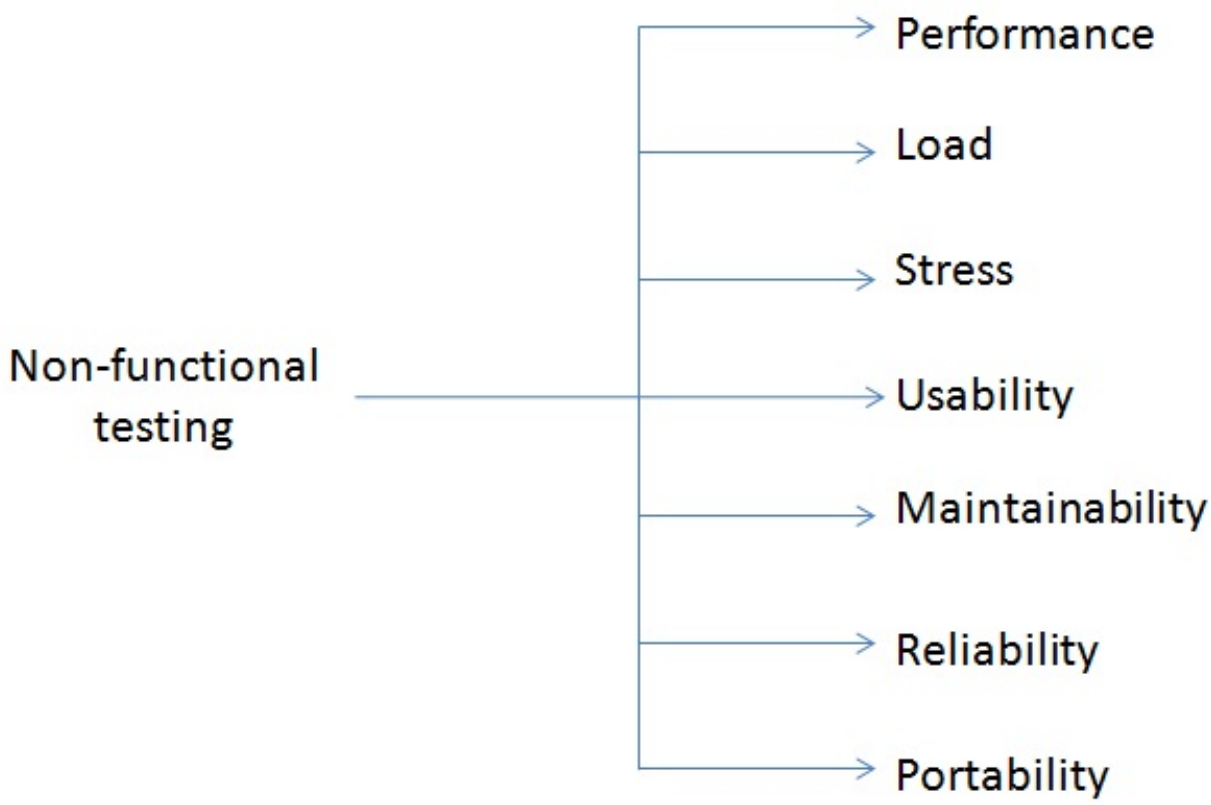
Test levels

- Component testing
- Integration testing
- System testing
- Acceptance testing

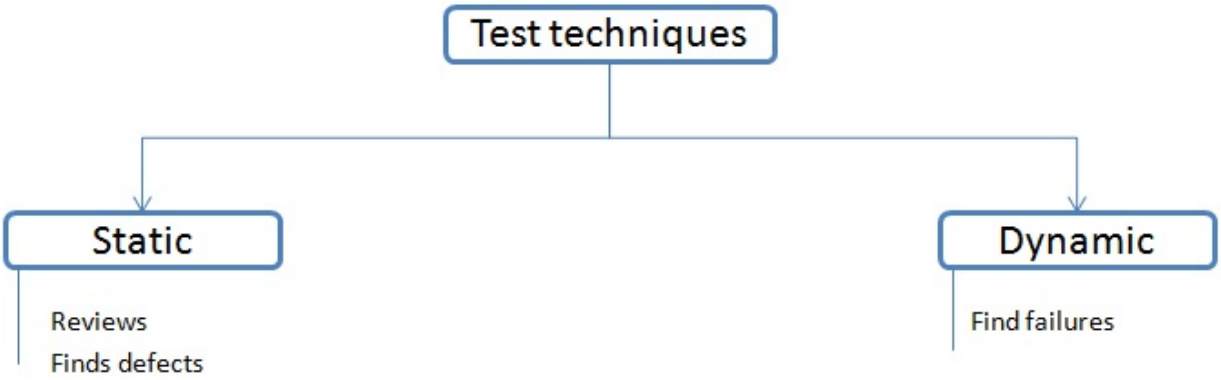


Testing types

- Functional testing
- Non-functional testing

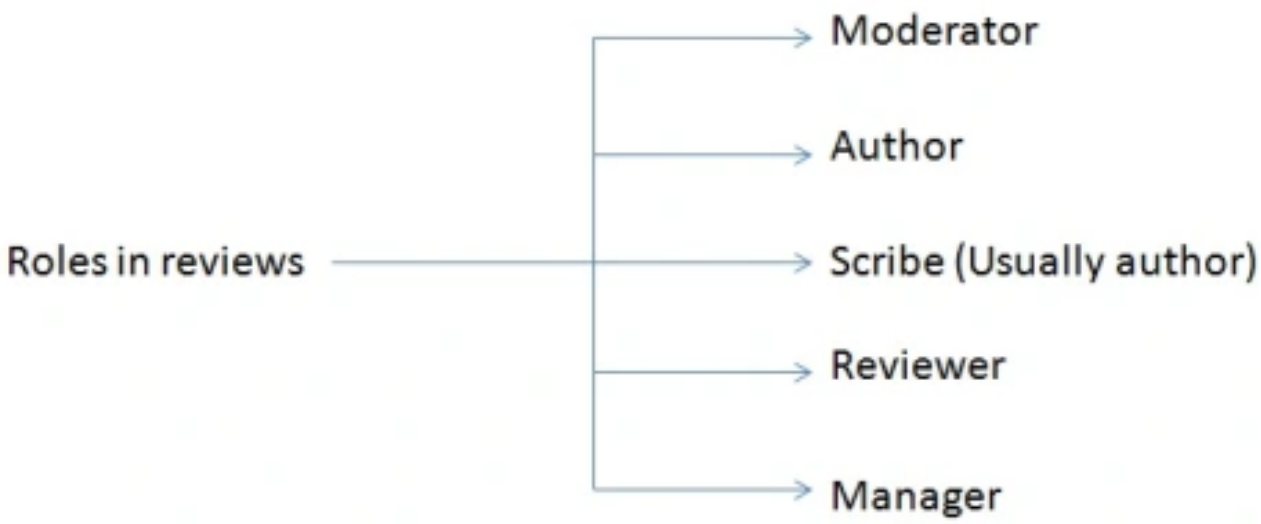

Non-functional testing
Performance
Load
Stress
Usability
Maintainability
Reliability
Portability

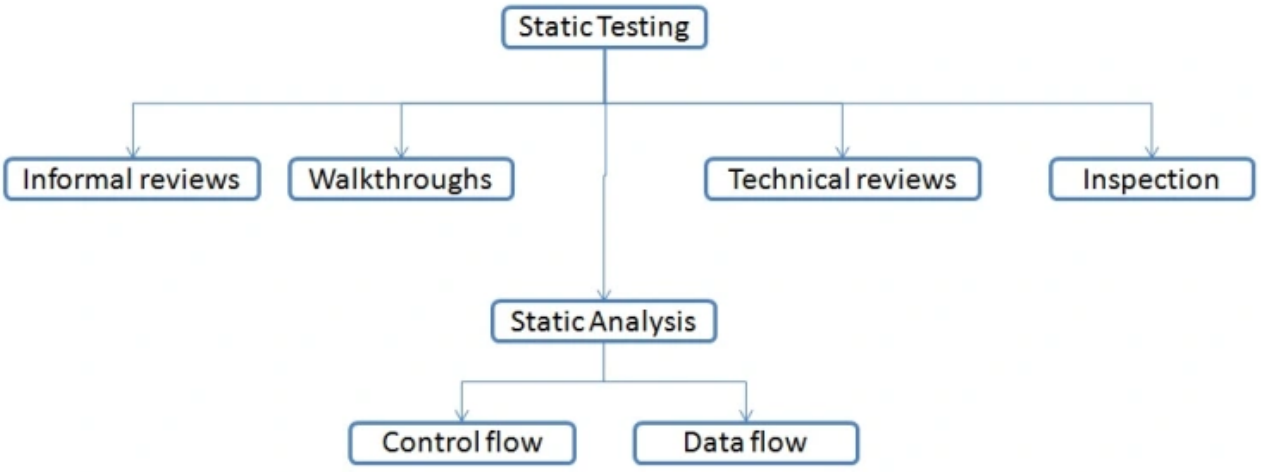
Chapter 3 – Static Techniques



Different phases of formal review:

1. Planning:
    - Moderator assignment, Define entry criteria
    - Number of reviewers, Size of document, roles for reviewers
2. Kick-off – Introduction to reviewers, Role assignments
3. Preparation – Actual review. Issues are recorded
4. Review meeting:
    - Logging phase
    - Discussion phase
    - Decision phase
5. Rework
6. Followup phase – To be done by the moderator.

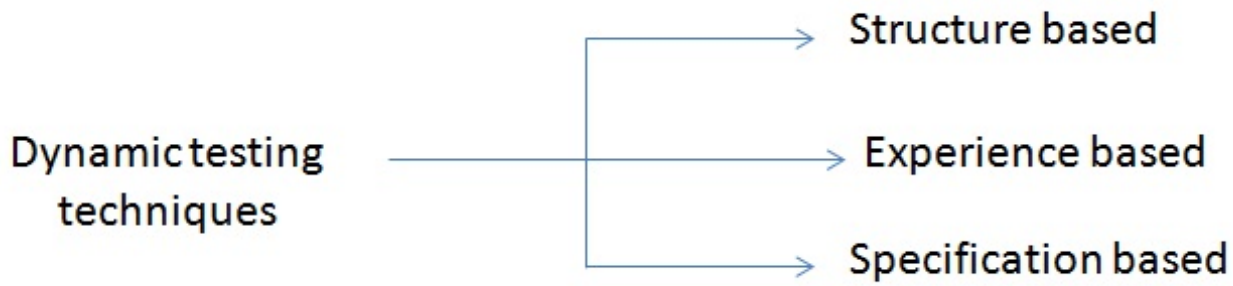

Roles in reviews
Moderator
Author
Scribe (Usually author)
Reviewer
Manager

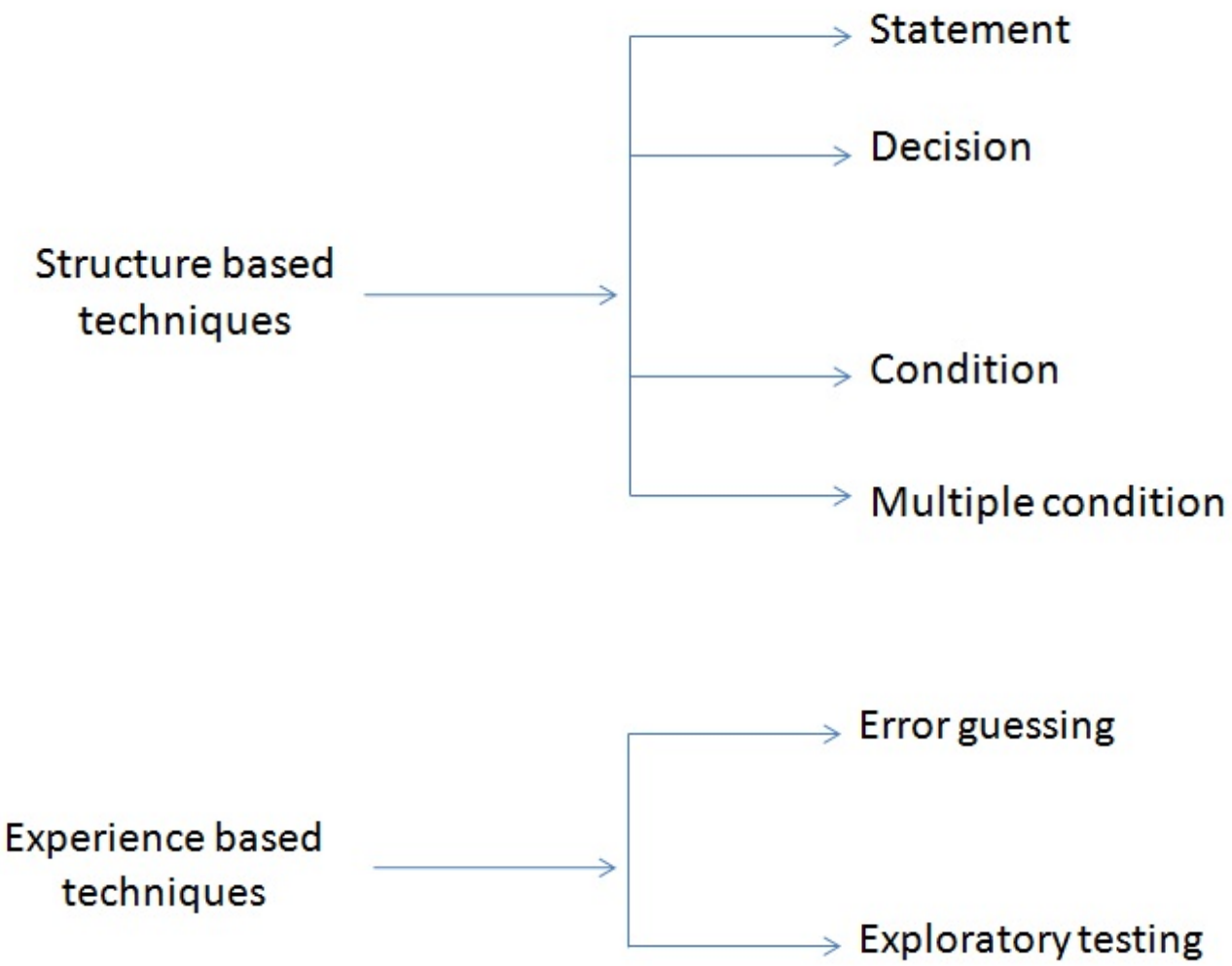

Static Testing
Informal reviews
Walkthroughs
Technical reviews
Inspection
Static Analysis
Control flow
Data flow

Chapter 4 – Test design techniques

Some key definitions:

1. Test cases are documented in a test case specification
2. Test procedures are documented in a test procedure specification
3. Test analysis is done to identify test conditions on some ‘basis’
4. Test condition is something we can test
5. Test possibilities – Biggest set of test conditions – Some of these could be discarded
6. Test case:
    - Defined input and expected output. Concept of oracle.
    - If the expected output is vague then it's a partial oracle
    - Should have objective
7. Test procedure/Test scripts – Document that defines steps to be taken while running tests





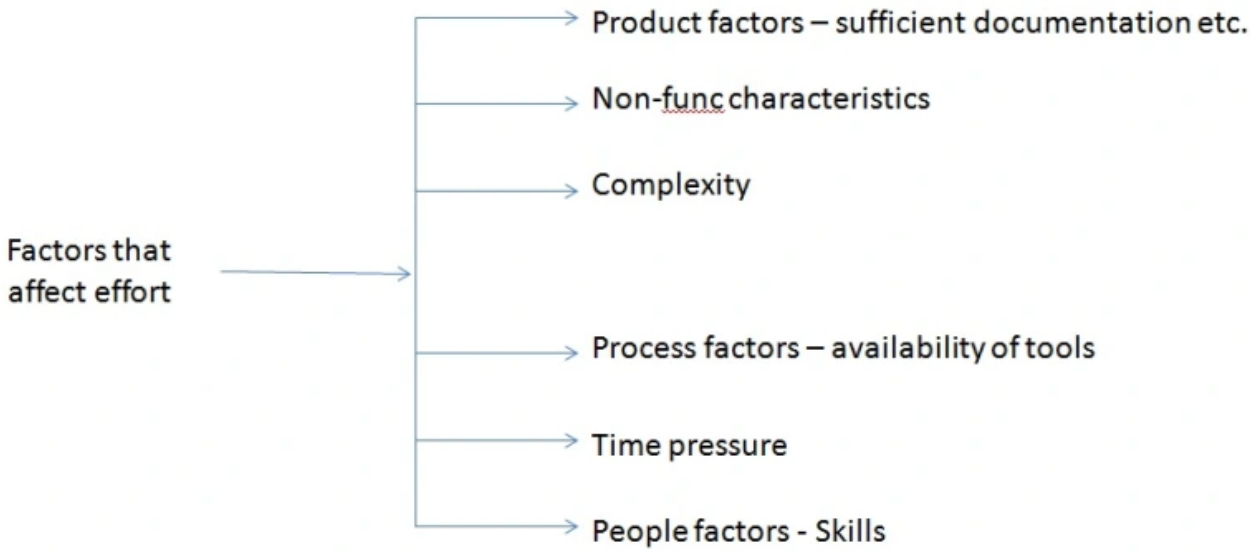
Specfication based testing

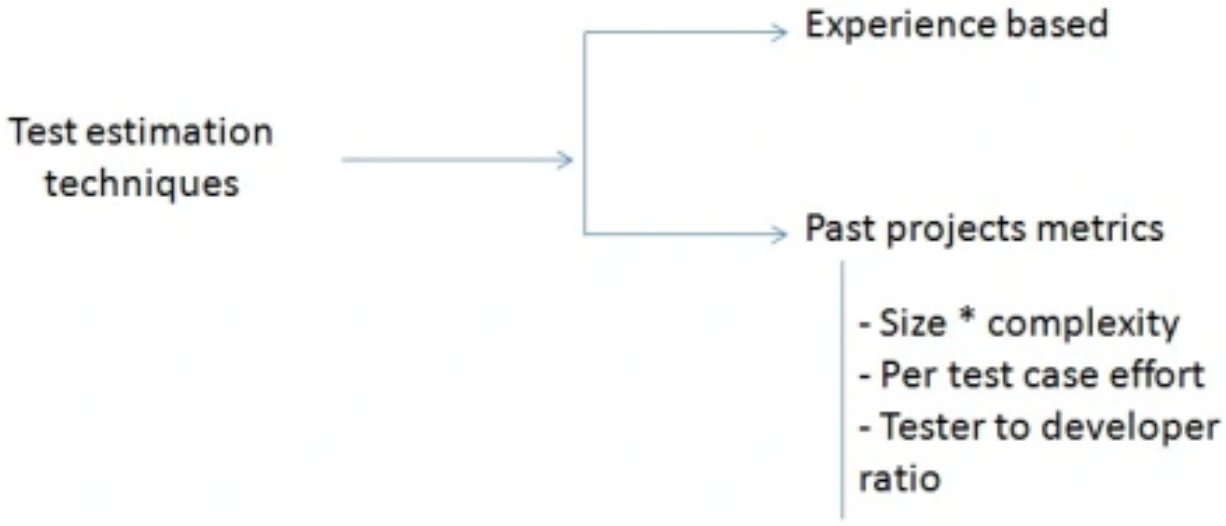
- Equivalence Partitioning
- Boundary value analysis
- Decision tables
- State transition
- Use case testing

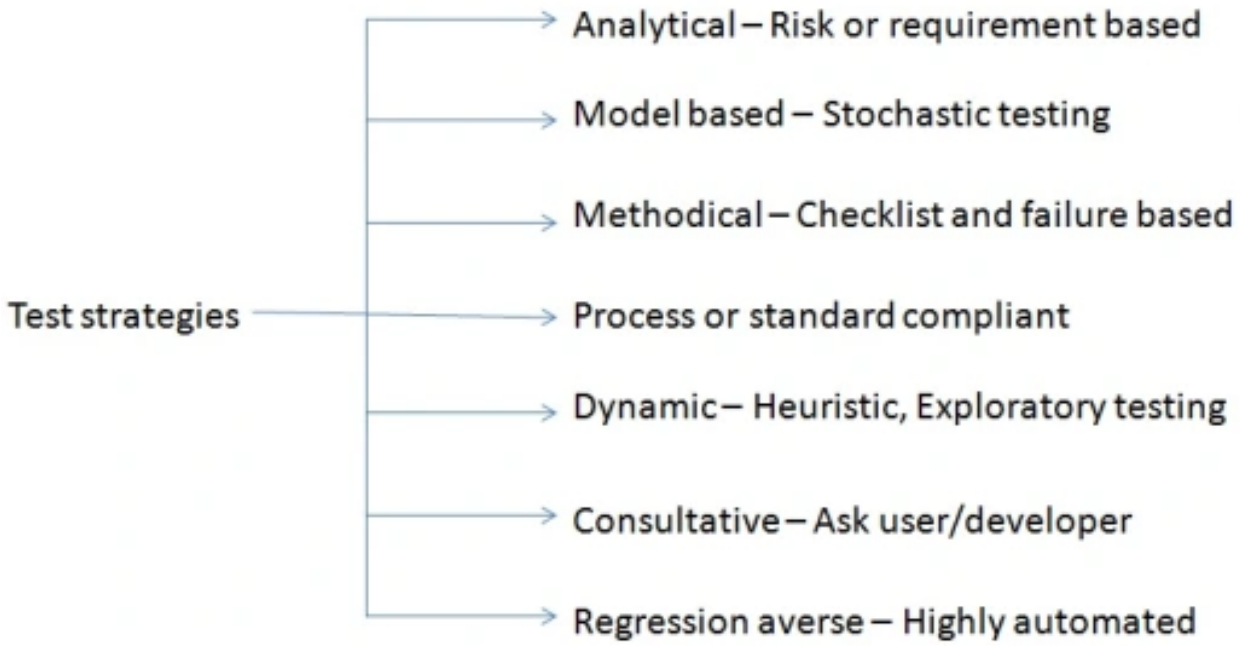
Chapter 5 – Test management

Skills needed in tester

- Knowledge of application/business domain
- Technology
- Testing process





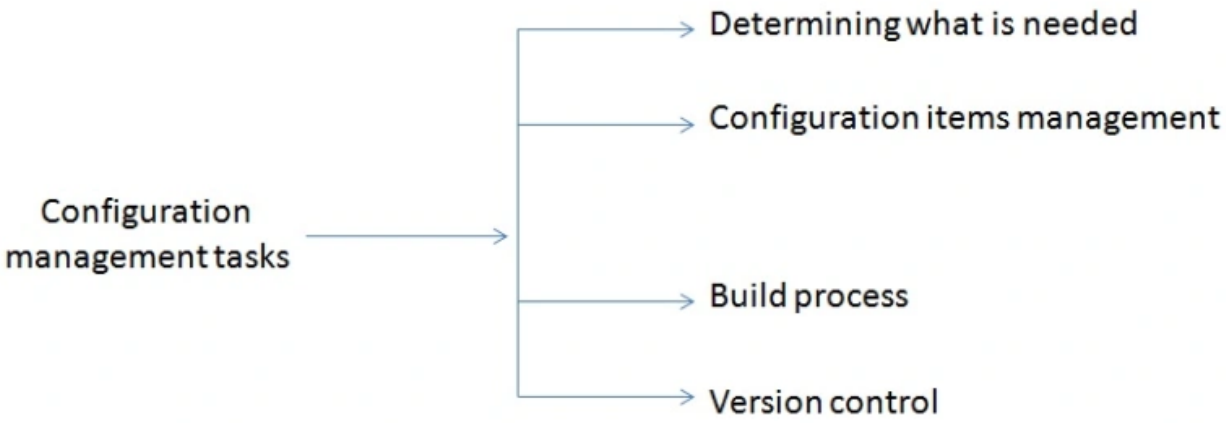


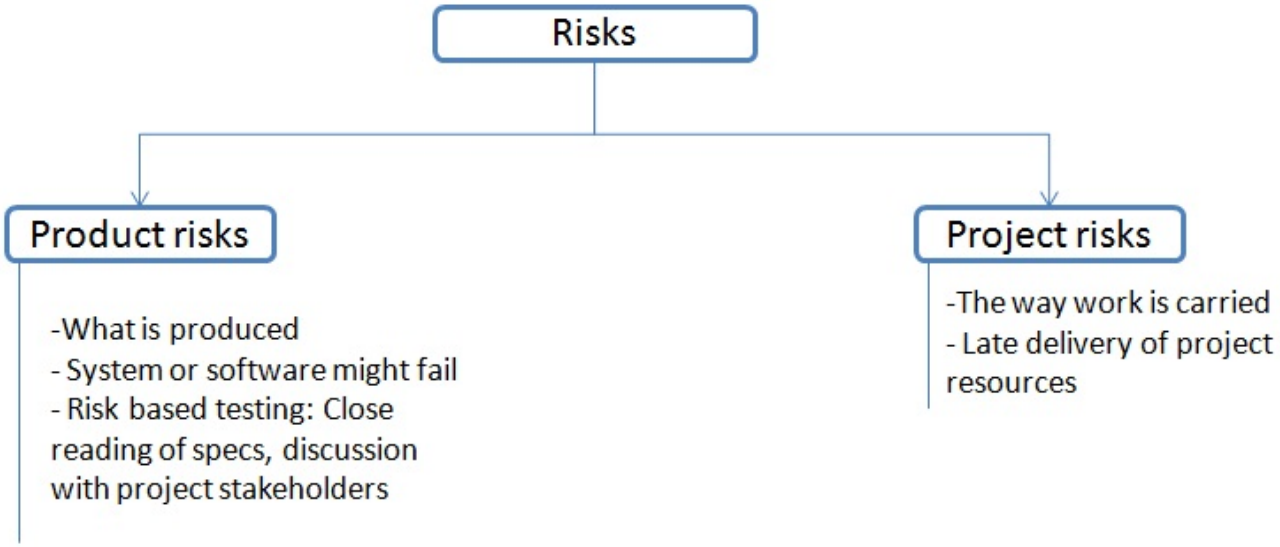
Why to do test monitoring

- Feedback to test team and manage
- Visibility on results
- Test coverage status
- Data for future estimation

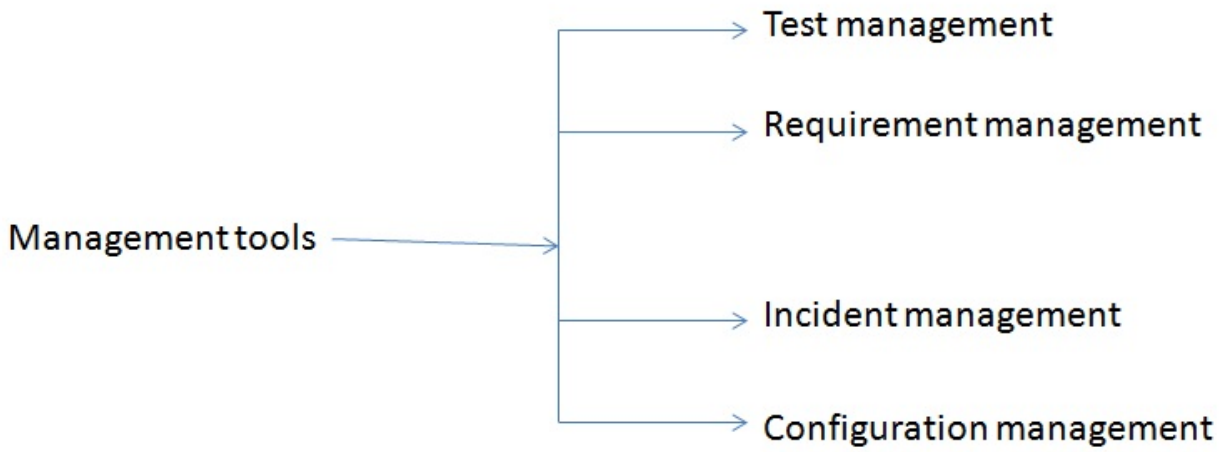
Why to do test reporting

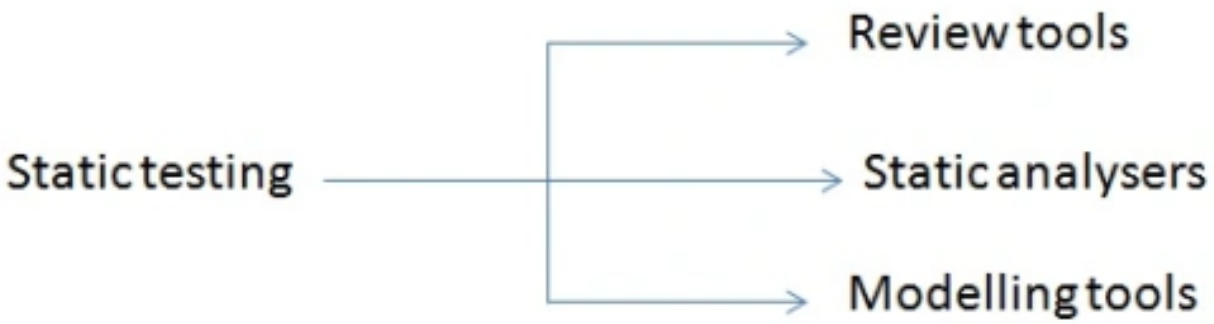
- Helps stakeholders to understand results
- Enlighten and influence stakeholders

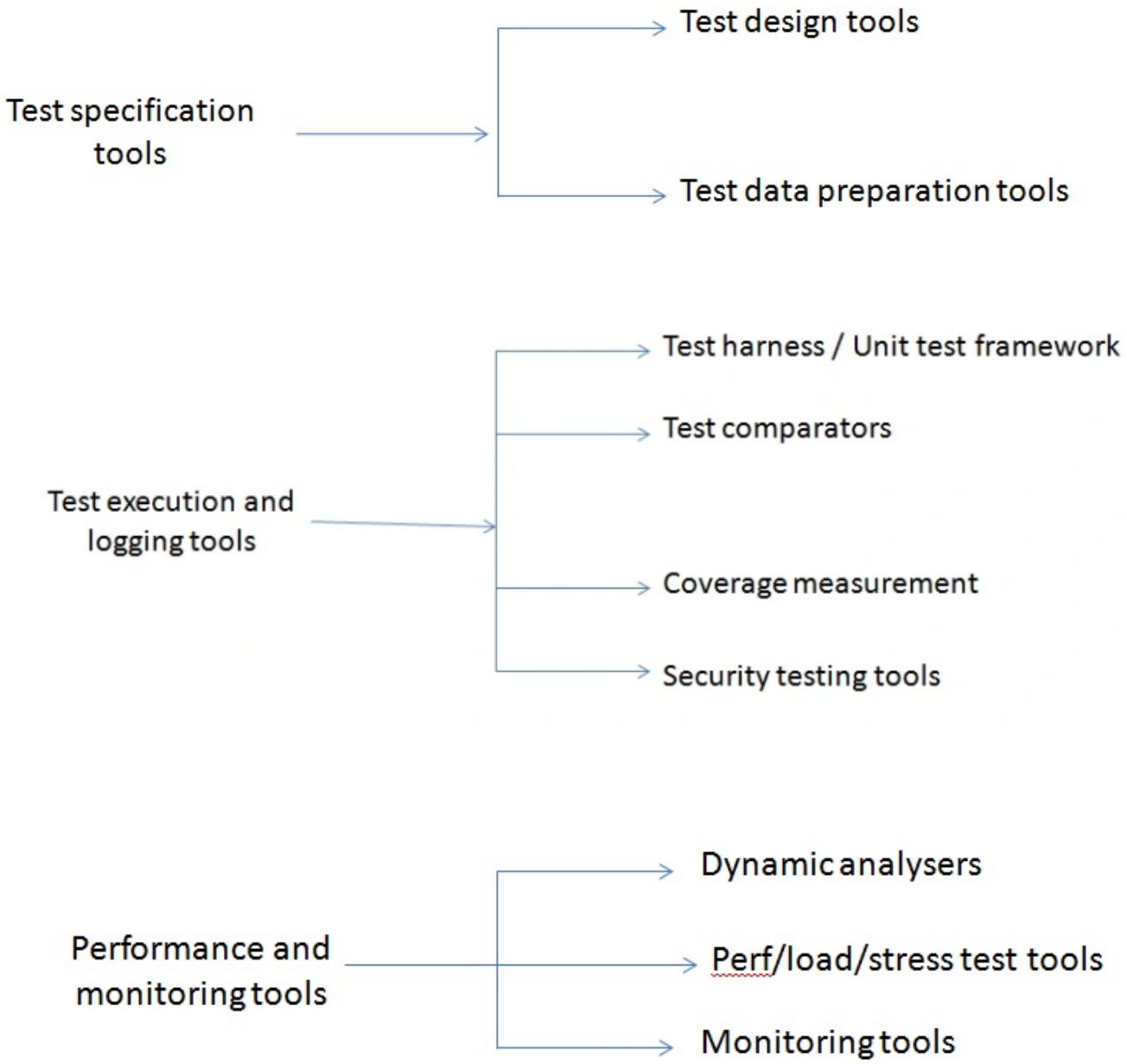

Configuration management tasks
Determining what is needed
Configuration items management
Build process
Version control


Risks
Product risks
-What is produced
- System or software might fail
- Risk based testing: Close reading of specs, discussion with project stakeholders
Project risks
-The way work is carried
- Late delivery of project resources

Chapter 6 – Tools






Test specification tools
Test design tools
Test data preparation tools
Test execution and logging tools
Test harness / Unit test framework
Test comparators
Coverage measurement
Security testing tools
Performance and monitoring tools
Dynamic analysers
Perf/load/stress test tools
Monitoring tools

General notes related to key questions

Test plan should include:

1. Test plan identifier
2. Introduction
3. Test items
4. Features to be tested
5. Approach
6. Item pass/fail criteria
7. Suspension and resumption criteria
8. Test deliverables
9. Testing tasks
10. Environment needs
11. Responsibilities
12. Staffing and training needs
13. Schedule
14. risks and contigencies
15. Approvals

Test summary report should include:

1. Test summary report ID
2. Summary
3. Summary of activities
4. Evaluation
5. Comprehensive assessment
6. Variances
7. Summary of results
8. Approvals

Incident description as per IEEE standard:

1. Inputs
2. Expected results
3. Actual results
4. Anomalies
5. Date and Time
6. Procedure step
7. Attempts to repeat
8. Testers
9. Observers