Name:

Surname:

Number of year experiences:

**QCM**

1. **When what is visible to end-users is a deviation from the specified or expected**

**behaviour, this is called**

a) an error

b) a fault

c) a failure

d) a defect

e) a mistake

2.**Regression testing should be performed**

v) every week

w) after the software has changed

x) when a bug fix is received

y) when porting software to a new environment

z) when the project manager says

a) v & w are true, x – z are false

b) w, x & y are true, v & z are false

c) w & y are true, v, x & z are false

d) w is true, v, x, y and z are false

e) All of the above are true

3. **Testing should be stopped when**

a) all the planned tests have been run

b) time has run out

c) all faults have been fixed correctly

d) both a) and c)

e) it depends on the risks for the system being tested

4. **Order numbers on a stock control system can range between 10000 and 99999**

**inclusive. Which of the following inputs might be a result of designing tests for only**

**valid equivalence classes and valid boundaries?**

a) 1000, 50000, 99999

b) 9999, 50000, 100000

c) 10000, 50000, 99999

d) 10000, 99999, 100000

e) 9999, 10000, 50000, 99999, 100000

5. **Consider the following statements about early test design:**

i. early test design can prevent fault multiplication

ii. faults found during early test design are more expensive to fix

iii. early test design can find faults

iv. early test design can cause changes to the requirements

v. early test design takes more effort

a) i, iii & iv are true. ii & v are false

b) iii is true, i, ii, iv, & v are false

c) iii & iv are true. i, ii & v are false

d) i, iii, iv & v are true, ii is false

e) i & iii are true, ii, iv & v are false

6. **Non-functional system testing includes:**

a) testing to see where the system does not function correctly

b) testing quality attributes of the system including performance and usability

c) testing done by users

d) testing a system feature using only the software required for that function

e) testing for functions that should not exist

7. **Which of the following is NOT part of configuration management?**

a) status accounting of configuration items

b) auditing conformance to ISO 9000

c) identification of test versions

d) record of changes to documentation over time

e) controlled library access

8. **What is the purpose of test completion criteria in a test plan?**

a) to know when a specific test has finished its execution

b) to ensure that the test case specification is complete

c) to set the criteria used in generating test inputs

d) to know when test planning is complete

e) to plan when to stop testing

9. **Consider the following statements**

i. an incident may be closed without being fixed.

ii. incidents may not be raised against documentation.

iii. the final stage of incident tracking is fixing.

iv. the incident record does not include information on test environments.

v. incidents should be raised when someone other than the author of the

software performs the test.

a) ii and v are true, i, iii and iv are false

b) i and v are true, ii, iii and iv are false

c) i, iv and v are true, ii and iii are false

d) i and ii are true, iii, iv and v are false

e) i is true, ii, iii, iv and v are false

10. **Given the following code, which is true about the minimum number of test cases**

**required for full statement and branch coverage**

Read P

Read Q

IF P+Q > 100 THEN

Print "Large"

ENDIF

IF P > 50 THEN

Print "P Large"

ENDIF

a) 1 test for statement coverage, 3 for branch coverage

b) 1 test for statement coverage, 2 for branch coverage

c) 1 test for statement coverage, 1 for branch coverage

d) 2 tests for statement coverage, 3 for branch coverage

e) 2 tests for statement coverage, 2 for branch coverage

11. **Consider the following statements:**

i. 100% statement coverage guarantees 100% branch coverage.

ii. 100% branch coverage guarantees 100% statement coverage.

iii. 100% branch coverage guarantees 100% decision coverage.

iv. 100% decision coverage guarantees 100% branch coverage.

v. 100% statement coverage guarantees 100% decision coverage.

a) ii is True, i, iii, iv & v are False

b) i is True, ii iii, iv & i are False

c) i & v are True, ii, iii & iv are False

d) ii & iii are True, i, iv & v are False

e) ii, iii & iv are True, i & v are False

12. **Functional system testing is**

a) testing that the system functions with other systems

b) testing by users to check that the system will perform business functions

c) testing that the components that comprise the system function together

d) testing the end to end functionality of the system as a whole

e) testing the system performs functions within specified response times

13. **Which of the following items would not come under Configuration Management?**

a) Software

b) operating systems

c) test documentation

d) live data

e) user requirement documents

14. **What can static analysis NOT find?**

a) the use of a variable before it has been defined

b) complex code

c) whether the value stored in a variable is correct

d) the re-definition of a variable before it has been used

e) bad programming practices

15. **Which of the following techniques is NOT a black box technique?**

a) equivalence partitioning

b) state transition testing

c) LCSAJ

d) syntax testing

e) boundary value analysis

16. **The main focus of acceptance testing is**

a) finding faults in the system

b) ensuring that the system meets requirements

c) testing the system with other systems

d) testing from a business perspective

e) testing by an independent test team

17. **Which of the following statements is FALSE?**

a) black box design techniques all have an associated measurement technique.

b) white box design techniques all have an associated measurement technique.

c) cyclomatic complexity is not a test measurement technique

d) black box measurement techniques all have an associated test design technique.

e) white box measurement techniques all have an associated test design technique.

**18.** **The difference between re-testing and regression testing is:**

a) re-testing is running a test that found a fault; regression testing looks for unexpected

side-effects

b) re-testing looks for unexpected side-effects; regression testing is repeating those tests

c) re-testing is done after faults are fixed; regression testing is done earlier

d) re-testing uses different environments, regression testing uses the same environment

e) re-testing is done by developers, regression testing is done by independent testers

**19.** **Which of the following is NOT a valid test objective:**

a) to show that the software meets its requirement

b) to find faults in the software

c) to prove that the software has no faults

d) to give confidence in the software

e) to find performance problems

**20. An input field takes the year of birth between 1900 and 2004.The boundary values for testing this field are:**

1. 0,1900,2004,2005

b) 1900, 2004

c) 1899,1900,2004,2005

d) 1899, 1900, 1901,2003,2004,2005

**Analyze**

**1. What statement do you consider to be most important and why?**

a) Testing has the primary intent of showing the system meets the users needs

b) Testing has the primary intent of finding faults

**2. You have run all your tests and they all pass. Is this good news or bad news?**

**3. What would you do if you were asked to test a system which is unfamiliar to you has out-of-date or inadequate documentation?**

**4. Do you consider positive or negative testing to be most important or trying to break the system - and why?**

**5. How would you define a good test?**

**Study case**

1. **Scenario: You have two sets of tests to run on the new version of the software. Test Set 1: a test set to provide confidence that software has not regressed from the previous version. Test Set 2: a detailed test set to investigate potential faults in the new release of software. Having run test set 1 you discover a number of faults in the new version of software – what do you do?**

**2. Scenario: You have planned to run 600 tests on your own. Each test will take approximately 10 minutes to run. Your manager has told you that you must complete these tests within one week. What would you do?**

**3. Scenario:**

**You are testing 2 programs and have 3 weeks to test them both. Having**

**run all of your tests on both programs you finish testing within 2 weeks.**

**You need to decide which of the 2 programs you would re-visit and run**

**further tests against. Choose which program you would re-test (can**

**choose only one!) – and state you reasons:**

**Program A**

**Programmer: A**

**Complexity Level: 2**

**Lines of Code: 2000**

**Number of tests: 100**

**Number of bugs found: 10**

**(1 high severity, 3 medium & 6 low)**

**Program B**

**Programmer: B**

**Complexity Level: 2**

**Lines of Code: 2000**

**Number of tests: 100**

**Number of bugs found: 50**

**(10 high severity, 25 medium & 15 low)**

**4. An ATM has been specified to work in the following way: Enter a card and if the card is invalid reject the card and exit system. If it is a valid card then enter a PIN number. Check to see if the PIN is invalid – if it is then display a message ‘invalid pin number, please re-enter’. If 3 attempts are made with an invalid pin then the machine keeps the card. If it is a valid PIN then the user can select one of the following transactions: • Cash Withdrawal without receipt • Cash Withdrawal with receipt • Balance Enquiry • Statement request • Cancel What tests would you produce to test this application? State any assumptions when testing**

**5. The following is an extract from a fault log, write down any potential**

**problems or omissions with this:**

