3. Knowledge check

1. Offered price of the project depends on:
   a) Cost estimation of the project
   b) Contract terms and volatility of requirements
   c) Financial situation and market opportunity
   d) All of above

2. Which of following project effort estimation techniques predicts, that all available budget will be spent on the project:
   a) Expert judgment
   b) Estimation by analogy
   c) Parkinson's law
   d) Algorithmic cost modeling

3. COCOMO stands for:
   a) Comprehensive cost model
   b) Complete cost estimation model
   c) Constructive cost model
   d) Constructive cost estimation model

4. What is considered standard software life cycle by IEEE standard:
   a) requirements, operation, design, concept, implementation, installation, retirement, test
   b) concept, requirements, design, implementation, test, installation, operation, retirement
   c) test, operation, retirement, design, requirements, concept, implementation, installation
   d) installation, operation, implementation, concept, design, test, requirements, retirement

5. COCOMO considers following types of projects:
   a) Organic, Synthetic, Generic
   b) Organic, Semidetached, Embedded
   c) Reused, Semidetached, Post-architecture
   d) Reused, Post-architecture, Genetic, Organic

6. According to the COCOMO, depending on project size, time and effort is related in following way:
   a) Time spent on project increases superlinearly but effort sublinearly
   b) Time spent on project increases sublinearly but effort superlinearly
   c) Time and effort spent on project increases superlinearly
   d) Time and effort spent on project increases sublinearly

7. Do to functional point analysis, before it you have to calculate CLOCs:
   a) true
   b) false

8. ISO standard considers following quality factors:
   a) functionality, reliability, usability, efficiency, maintainability, portability
   b) reliability, accessibility, performance, security, robustness, maintainability

9. CMM levels are named in increasing maturity as follows:
   a) repeatable, optimizing, defined, initial, managed
   b) primary, defined, managable, optimized

    c) documented, inspected, reviewed, optimized
    d) initial, repeatable, defined, managed, optimizing

10.   CMM maturity level 3 is comparable with ISO 9xxx/10xxx quality standards.
    a) true
    b) false

11.   By introducing organizational metrics program, it is impossible to quantify return on investment:
    a) true
    b) false

12.   While working in quality assurance, your main goal is to improve chosen quality measures:
    a) true
    b) false

13.   Software debugging is usually done before testing:
    a) true
    b) false

14.   Which are correct types of software functionality tests:
    a) Validation tests (also called positive tests), defect tests (also called negative tests)
    b) Smoke tests, regression tests, requirements tests, release tests, user acceptance tests

15.   Which are correct types of software scope tests:
    a) Smoke tests, regression tests, requirements release tests, user acceptance tests
    b) Unit tests, component tests, integration tests, interface tests, system tests

16.   Which are correct types of software testing policy tests:
    a) Smoke tests, regression tests, requirements tests, release tests, user acceptance tests
    b) Unit tests, component tests, integration tests, interface tests, system tests

17.   When developing test cases, following things should be covered:
    a) All possible situations, including negative situations
    b) All branches, conditions, loops, interfaces and invocation paths
    c) All branches, conditions and loops
    d) Neither of above

18.   Which approach should be used to develop efficient test cases for numeric calculations, which also depend on logical conditions:
    a) equivalence partitions
    b) boundary values
    c) decision tables
    d) all of above

19.   If tested system has persistent memory, test cases should:
    a) ignore existing data set
    b) use CRUD approach
    c) maintain unchanged data set
    d) use CRUD approach and/or maintain data set

20. If all tests pass without fails, even if there is fault in the tested system, it is called:
   a) negative result
   b) positive result
   c) false positive result (also called Type I error)
   d) false negative result (also called Type II error)

21. If you write this knowledge check first time, add key 21 at the end of your results and write your name and surname, e.g.
   21 = Jānis Vītoliņš