Software Testing and Quality Assurance MCQ with Answers

1. When there are disagreements between the phase project manager and overall project manager, the matter should be escalated to the ____.
a. Top-level Managers
b. Upper Management
c. Change Control Board
d. CEO

2. Which of the following is a snapshot of the project that gives a concise summary of the current condition of a project?
a. Six Sigma
b. Earned Value Analysis
c. Software Metric
d. Project Status Report

3. The objective of ____ is to find problems and fix them to improve quality of a project.
a. Software bug
b. Software complexity
c. Software testing
d. Software development

4. Which type of testing process will create test scripts that will run automatically, repetitively and through much iteration?
a. White Box Testing
b. Black Box Testing
c. Manual Testing
d. Automated Testing

5. Unit testing is to test the ____ of the units.
a. Performance
b. System issues
c. Functionality
d. Hardware failure

6. At the integration level, achieving the desired goal may be prevented in ____ testing if the test cases and results are not recorded properly.
a. Bottom-Up
b. Big Bang
c. Top-Down
d. System

7. Which is an example of an indicator?
a. Number of tests
b. Number of staff-hours
c. Actual versus planned task completions
d. Defects per thousand lines of code

8. Which of the following is used to collect direct measures of software engineering output and also its quality?
a. Indirect measure
b. Direct measure
c. Function-oriented metrics
d. Size-oriented metrics

9. In ____, there are three characteristics that serve as a guide for the evaluation of a good design.
a. Design and software quality
b. Design concept
c. Software design
d. Modular design

10. Which of the following defines the relationship between major structural elements of the software?
a. Data design
b. Linked list
c. Cohesion
d. Architectural design

11. Cleanroom software engineering is an approach that emphasises the need to build ____ into software as it is being developed.
a. Defects
b. Debugging
c. Correctness
d. Unit testing

12. The projected usage of the software is analysed and a suite of test cases that exercise____ of usage are planned and designed.
a. An error record
b. A statistical quality control
c. Certification
d. Probability distribution

13. Which of the following is a non-profit organisation and is also the world's leading professional association for the advancement of technology?
a. IEEE
b. ANSI
c. CMMI
d. NDIA

14. In which level of organisational maturity, conditions are not stable for the development of quality software?
a. Optimising
b. Defined
c. Initial
d. Repeatable

15. ____ products are capable of being used to generate entire applications from design specifications.
a. CASE
b. I-CASE
c. Rapid Prototyping
d. Repository

16. The primary objective for tools in this category is to represent business data objects flow between different business areas within a company. Which category is this?
a. Process Modeling & Management Tools
b. Project Planning Tools
c. Business Process Engineering Tools
d. Risk Analysis Tools

17. A ____ is a collection of objects or elements and is used as a cornerstone of formal methods.
a. Set Operators
b. Signature
c. Set
d. Union operator

18. Which formal specification language can be used to describe the syntax of the programming language?
a. Formal grammar
b. Semantic domain
c. Syntactic domain
d. Sequence

19. Software re-engineering can be defined as ____.
a. The top level process of engineering and a system to meet overall requirements.
b. The examination and alteration of an existing subject system to reconstitute it in a new form.
c. The engineering process of understanding, analysing, and abstracting the system to a new form at a higher abstraction level.
d. The set of engineering activities that consumes the products and artifacts derived from legacy software and new requirements to produce a new target system.

20. A maintenance organisation's short term goal is to clear the growing backlog of maintenance demands and the long term goal is to support change at ____.
a. Higher level
b. Low level
c. Requirements level
d. Code-level

21. Consider the below mentioned statements:
1. A phase project manager monitors the overall project and is responsible to monitor the work of a project manager.
2. Phase project managers and overall project managers are together responsible for the contingency plans.
State True or False:
a. 1-False, 2-False
b. 1-True, 2-True
c. 1-False, 2-True
d. 1-True, 2-False

22. Consider the below mentioned statements:
1. White box testing technique guarantees that all independent paths within a module has been exercised at least once.
2. White box testing technique executes only one loop at their boundaries and within their operational bounds.
State True or False:
a. 1-True, 2-False
b. 1-False, 2-True
c. 1-True, 2-True
d. 1-False, 2-False

23. Cutting out unnecessary requirements is called ____.
A) Requirements Scrubbing
B) Requirements Planning
C) Requirements Scheduling
D) Requirements Engineering

24. Consider the below mentioned statements:
1. Metrics do not establish a baseline from which improvements can be measured.
2. Metrics allow an organisation to identify the causes of defects which have the greatest effect on software development.
State True or False:
a. 1-False, 2-False
b. 1-True, 2-True
c. 1-False, 2-True
d. 1-True, 2-False

25. Consider the below mentioned statements:
1. Control hierarchy, also called program structure, represents the organisation of program components (modules) and implies a hierarchy of control.
2. Control hierarchy represents procedural aspects of software such as sequence of processes, occurrence or order of decisions or repetition of operations.
State True or False:
a. 1-False, 2-False
b. 1-True, 2-True
c. 1-False, 2-True
d. 1-True, 2-False

26. Consider the below mentioned statements:
1. In Cleanroom software engineering, the serious hazards can be related to human safety, economic loss or effective operation of business and societal infrastructure.
2. The Cleanroom approach makes use of an outdated version of the incremental software model.
State True or False:
a. 1-False, 2-False
b. 1-True, 2-True
c. 1-True, 2-False
d. 1-False, 2-True

27. Consider the following statements:
1. there is a strong correlation between ISO 9001 and the CMMI.
2. ISO 9001 addresses the minimum criteria for an acceptable quality system.
State True or False.
a. 1- True, 2- False
b. 1- False, 2- True
c. 1- True, 2- True
d. 1- False, 2- False

28. An integrated CASE environment should provide the following:
1. Provide a mechanism for sharing software engineering information among all tools contained in the environment.
2. Enable a change to one item of information to be tracked to other related information items.
State True or False.
a. 1- True, 2- False
b. 1- True, 2- True
c. 1- False, 2- False
d. 1- False, 2- True

29. Consider the following statements:
1. Thou shall not compromise thy quality standards: Expert training and ongoing consulting is essential for success when formal methods are used for the first time.
2. Thou shall document sufficiently: Formal methods provide a concise, unambiguous and consistent method for documenting system requirements.
State True or False:
a. 1- True, 2- True
b. 1- True, 2- False
c. 1- False, 2- False
d. 1- False, 2 - True

30. Which of the following statements hold true:
1. Tools that support BPR include process modelers that allow organisations to run what-if scenarios on their key business processes.
2. BPR tools enables an organisation to set goals and gather information about defined and developed processes.
a. 1-True, 2-True
b. 1-False, 2- False
c. 1- False, 2- True
d. 1-True, 2-False

31. Identify the correct statements regarding project metrics.
1. Project metrics and the indicators derived from them are used by a project manager and a software team to adapt project work flow and technical activities.
2. The first application of project metrics on most software projects occurs during the testing of the developed product.
3. Metrics collected from past projects are used as a basis from which effort and time estimates are made for current software work
4. Results of metrics can be used to provide an indication of the usefulness of work products as they flow from one frame work activity to the next.
a. 1, 2 & 3
b. 1, 2 & 4
c. 2, 3 & 4
d. 1, 3 & 4

32. For every software organization, the key element is ____.
A) People
B) Project
C) Process
D) Product

33. SEI stands for ____.
A) System Engineering Institute
B) Software Engineering Institute
C) Software Engineers Institute
D) System Engineers Institute

34. PM-CMM stands for ____.
A) Process Management Capability Maturity Model
B) Product Management Capability Maturity Model
C) People Management Capability Maturity Model
D) Project Management Capability Maturity Model

35. PM-CMM was developed by ____.
A) IBM
B) IEEE
C) Microsoft
D) SEI

36. ____ is responsible for total project management.
A) Project Manager
B) Project Developer
C) Programmer
D) System Manager

37. PMI stands for ____.
A) Process Management Institute
B) Project Management Institute
C) Project Mapping Institute
D) Process Mapping Institute

38. DIN (Deutsches Institute for Normung) is a ____ organization.
A) Process Management
B) Product Management
C) Standardization
D) Software Development

39. ____ consists of measuring and correcting activities to ensure that the goals are achieved.
A) Staffing
B) Quality Management
C) Reporting Progress
D) Controlling

40. Analyzing progress compared to the baseline is known as ____ value management.
A) Earned
B) Spent
C) Cost
D) Time

41. Creating a ____ is the first thing you need to do when undertaking any kind of project.
A) Cost Estimation
B) Project Plan
C) Time Estimation
D) Resources Estimation

42. PERT stands for ____.
A) Program Extraction and Review Technique
B) Process Evaluation and Review Technique
C) Program Evaluation and Reversing Technique
D) Program Evaluation and Review Technique

43. The bulk of the cost of software development is due to the ____ needed.
A) Human Resources
B) Software Resources
C) Hardware Resources
D) Machinery Resources

44. Software Project Management begins with a set of activities that are collectively called ____.
A) Cost Estimation
B) Project Planning
C) Time Estimation
D) Resources Estimation

45. The statement „Estimating is as much art as it is science" is quoted by ____.
A) Charles Babbage
B) Pascal
C) Frederick Brooks
D) Von Neumann

46. ____ model produce a software cost estimate as a function of a number of variables which relate to some software metric and cost drivers.
A) Expert Judgment
B) Analogy Estimation
C) Top-Down Estimation
D) Algorithmic

47. A ____ consists of a list of a project's terminal elements with intended start and finish dates.
A) Schedule
B) Plan
C) Prototype
D) Estimation

48. ____ can provide a graphical representation of a project schedule.
A) Pie chart
B) Gantt chart
C) XY chart
D) Bar chart

49. The purpose of ____ is to plan how the activities in part or all of a project will be performed over a period of time.
A) Analyzing
B) Budgeting
C) Scheduling
D) Prototyping

50. While scheduling, the activities to be performed are defined in ____.
A) Project Plan
B) Cost Plan
C) Activity Plan
D) Work Breakdown Structure

51. ____ is an attempt to minimize the chances of failure caused by unplanned events.
A) Risk Management
B) Project Management
C) Cost Management
D) Quality Management

52. Risk is the possibility of ____.
A) Gain
B) Loss
C) Profit
D) Credit

53. There are ____ stages in the process of project risk management.
A) Three
B) Four
C) Two
D) Five

54. ____ risks threaten the quality and timeliness of the software to be produced.
A) Project
B) Business
C) System
D) Technical

55. ____ is an umbrella activity that is applied throughout the software process.
A) Configuration Management
B) Requirements Planning
C) Requirements Scheduling
D) Requirements Engineering

56. ____ is a set of software engineering activities that occur after software has been delivered to the customer.
A) Analysis
B) Support
C) Implementation
D) Testing

57. ____ is a methodology to control and manage a software development project.
A) Version Control
B) Change Control
C) SCM
D) Configuration Audit

58. WBS stands for ____.
A) Work Breakdown System
B) Work By Standard
C) Work Breakdown Structure
D) Work By System

59. Consider the below mentioned statements:
1. While conducting unit testing, the local data structure is examined to ensure that the temporarily stored data maintains its integrity during all the steps in an algorithm's execution.
2. Black box testing is an effective technique for uncovering a broad array of path errors.
State True or False:
a. 1-False, 2-False
b. 1-True, 2-True
c. 1-True, 2-False
d. 1-False, 2-True

60. ____ principle must be followed throughout the software development.
A) Re-allotment
B) Incrementality
C) Decrementality
D) Reworking

61. The aim of an organizational structure is to facilitate cooperation towards a common ____.
A) Philosophy
B) Business
C) Goal
D) Requirement

62. The task of organizing can be viewed as building a ____.
A) Project
B) Business
C) Process
D) Team

63. ____ is an umbrella activity that is applied throughout the software process.
A) Software Quality Assurance
B) Software Quality Management
C) Software Quality Testing
D) Software Quality Engineering

64. The goal of software assurance is to reduce ____.
A) Cost
B) Risks
C) Time
D) Quality

65. FTR stands for ____.
A) File Transfer
B) Formal Telephonic Review
C) Formal Technical Review
D) Formal Telegraphic Review

66. ____ is a method used to identify defects in an artifact before progressing to the next stage of development.
A) Testing
B) Debugging
C) Process
D) Formal Technical Review

67. ____ analysis is a golden opportunity for process improvement that should not be missed.
A) Project Closure
B) Project Estimation
C) Project Cost
D) Project Schedule

68. The data obtained during the closure analysis are used to populate the ____.
A) Project Database
B) Process Database (PDB)
C) Database
D) Records

69. Many projects use the ____ method for estimation.
A) Top-down
B) Incremental
C) Bottom-up
D) Spiral

70. The productivity of a project is measured in terms of ____ per person-month.
A) Testing
B) Debugging
C) Codes Produced
D) Function Points

71. ____ provides a framework, from which, a comprehensive plan for software development can be established.
A) Product
B) Process
C) People
D) Project

72. ____ is a collection of tasks handled in a planned and systematic order.
A) Plan
B) Product
C) Process
D) Project

73. The factors influencing project management is/are ____.
A) Time
B) Cost
C) Scope
D) All of the above

74. ____ stage determines the nature and scope of the development.
A) Planning
B) Design
C) Implementation
D) Initiation

75. The items that comprise all information produced as part of the software process are collectively called a ____.
A) Software Process
B) Software Project
C) System Specification
D) Software Configuration