



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Bachelor of Computer Applications
Course Name – Software Engineering
Course Code - BCA501
(Semester V)

Time : 1 Hr.25 Min.

Full Marks : 70

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 70=70

Choose the correct alternative from the following :

- (1) The spiral model has two dimensions namely _____ and _____
 - a) diagonal, angular
 - b) radial, perpendicular
 - c) radial, angular
 - d) diagonal, perpendicular
- (2) Which two models don't allow defining requirements early in the cycle?
 - a) Waterfall & RAD
 - b) Prototyping & Spiral
 - c) Prototyping & RAD
 - d) Waterfall & Spiral
- (3) A company is developing an advanced version of their current software available in the market, what model approach would they prefer?
 - a) RAD
 - b) Iterative Enhancement
 - c) Both RAD & Iterative Enhancement
 - d) Spiral
- (4) Which is the first step in the software development life cycle?
 - a) Analysis
 - b) Design
 - c) Problem/Opportunity Identification
 - d) Development and Documentation
- (5) The software _____ of a program or computing system is the structure or structures of the system, which comprise software components, the externally visible properties of those components, and the relationships among them.
 - a) Design
 - b) Architecture
 - c) Process
 - d) Requirement
- (6) Prototyping aims at....
 - a) end user understanding and approval
 - b) program logic
 - c) planning of data flow organization
 - d) None of these
- (7) Which of the following life cycle models can be chosen if client is not very much aware of the requirement?
 - a) Spiral
 - b) Waterfall

- c) RAD
- d) Prototype Model
- (8) SDLC models can be selected based upon
- a) Effort of Development team
- b) Development time
- c) Cost
- d) All of these
- (9) What is the first step of requirement elicitation?
- a) Identifying Stakeholders
- b) Listing out Requirements
- c) Requirements Gathering
- d) All of these
- (10) Which is true for SRS?
- a) SRS is the main input of the software product design process
- b) SRS is the main output to the engineering design process
- c) SRS is the main output of the requirements specification activity
- d) None of these
- (11) Which of the following is not defined in a good Software Requirement Specification (SRS) document?
- a) Functional Requirement
- b) Nonfunctional Requirement
- c) Goals of implementation
- d) Algorithm for software implementation
- (12) Which is focused towards the goal of the organization?
- a) Feasibility study
- b) Requirement gathering
- c) Software requirement specification
- d) Software requirement validation
- (13) Why is Requirements Elicitation a difficult task?
- a) Problem of scope
- b) Problem of understanding
- c) Problem of volatility
- d) All of these
- (14) Which is not a characteristic of SRS?
- a) Verifiable
- b) Detailed View
- c) Black Box View
- d) Traceable
- (15) Select the developer specific requirement
- a) Portability
- b) Availability
- c) Reliability
- d) Both Portability & Reliability
- (16) Which is not a requirement gathering process?
- a) Scenario analysis
- b) Questionnaire
- c) Task Estimation
- d) Historical Analysis
- (17) In the Design phase, which is the primary area of concern?
- a) Architecture
- b) Data
- c) Interface
- d) All of these
- (18) Which type of DFD shows how the data flow is actually implemented in the system and it is also more specific and close to the implementation?
- a) Logical DFD
- b) Physical DFD
- c) Both Logical DFD & Physical DFD
- d) None of these
- (19) Every attribute is defined by its corresponding set of values is called _____.
- a) Entity
- b) Domain
- c) Relationship
- d) None of these
- (20) Cohesion is an extension of
- a) Abstraction concept
- b) Refinement concept
- c) Information hiding concept
- d) Modularity

- (21) Temporal cohesion means
- a) Coincidental cohesion
 - b) Cohesion between temporary variables
 - c) Cohesion between local variables
 - d) Cohesion with respect to time
- (22) Level 0 DFD is also known as
- a) Context Diagram
 - b) HIPO Diagram
 - c) Conceptual Diagram
 - d) Complete Diagram
- (23) Which symbol in DFD shows a process
- a) Circle
 - b) Rectangle
 - c) Arrow
 - d) Parallel Line
- (24) Which Cohesion has the lowest strength?
- a) Logical
 - b) Temporal
 - c) Coincidental
 - d) Sequential
- (25) Which of the following describes "Is-a-Relationship"?
- a) Aggregation
 - b) Generalization
 - c) Dependency
 - d) Normalization
- (26) How is generalization implemented in Object Oriented programming languages?
- a) Inheritance
 - b) Polymorphism
 - c) Encapsulation
 - d) Abstract Class
- (27) Cohesion measures
- a) Functional Strength of the modules
 - b) Interdependency of modules
 - c) Logical complexity among modules
 - d) None of these
- (28) Which one may be used to show relationship among different entities?
- a) Entity-relation diagram
 - b) Activity diagram
 - c) Use Case diagram
 - d) Gantt Chart
- (29) In Design phase, which is the primary area of concern?
- a) Architecture
 - b) Data
 - c) Interface
 - d) All of these
- (30) Which Estimation Software size should be known?
- a) Time estimation
 - b) Effort estimation
 - c) Cost estimation
 - d) Software size estimation
- (31) The process each manager follows during the life of a project is known as
- a) Project Management
 - b) Manager life cycle
 - c) Project Management Life Cycle
 - d) All of these
- (32) Failure of a purchased component to perform comes under _____ Risk
- a) Project Risk
 - b) Product Risk
 - c) Schedule Risk
 - d) None of these
- (33) Linearly independent path is required to calculate the
- a) Cyclomatic complexity
 - b) Software size
 - c) Reliability
 - d) Portability
- (34) The software becomes more popular if its user interface is _____.
- a) Attractive
 - b) Simple to use
 - c) Responsive in short time
 - d) All of these
- (35) Testing the software for the required specifications on the intended hardware

- a) Beta Testing
c) System Testing
- b) Alpha Testing
d) Regression testing
- (36) The New modules that need to be replaced or modified, and they are also designed against requirement specifications set in the previous stage is _____.
- a) Acceptance testing
c) Delivery
- b) System Testing
d) Design
- (37) Testing of software with actual data and in actual environment is called
- a) Alpha testing
c) Regression testing
- b) Beta testing
d) None of these
- (38) One weakness of boundary value analysis and equivalence partitioning is
- a) they are not effective
c) they explore combinations of input circumstances
- b) they do not explore combinations of input circumstances
d) None of these
- (39) When testing should be stopped
- a) When managers asked to stop
c) It depends upon the risk associated with the project
- b) When time runs out
d) None of these
- (40) A tester is executing a test to evaluate and it complies with the user requirement for a certain field to be populated by using a dropdown box containing a list of values, at that time the tester is performing _____.
- a) Black Box Testing
c) Load Testing
- b) White Box Testing
d) Regression Testing
- (41) For which of the following testing one need not to be aware of the internal working procedure?
- a) Branch Coverage
c) Both Branch Coverage & Code Coverage
- b) Code Coverage
d) Boundary Value Analysis
- (42) Alpha and Beta Testing are forms of _____ testing
- a) Acceptance Testing
c) Unit Testing
- b) System Testing
d) Integration Testing
- (43) Cyclomatic Complexity is in
- a) Black Box Testing
c) Green Box Testing
- b) White Box Testing
d) None of these
- (44) Which statement about testing is not true
- a) Testing is done to discover error
c) 100% error discovery is possible
- b) Testing increases productivity
d) None of these
- (45) Which test refers to the retesting of a unit, integration and system after modification, in order to ascertain that the change has not introduced new faults?
- a) Regression Test
c) Alpha Test
- b) Smoke Test
d) Beta Test
- (46) CFG is known as
- a) Control Flow Graph
c) Context Flow Graph
- b) Control Frequency Graph
d) Content Flow Graph
- (47) Test cases are designed by
- a) Tester
b) Developer

- c) System Analyst
d) Client
- (48) Cyclomatic Complexity of an if-else statement may be
a) 0
b) 2
c) 1
d) 3
- (49) Test cases should uncover errors like
a) Nonexistent loop termination
b) Comparison of different data types
c) Both Nonexistent loop termination & Comparison of different data types
d) None of these
- (50) Alpha testing is done at
a) Developers end
b) Clients end
c) Both Developers end & Clients end
d) None of these
- (51) The factors that determine the quality of a software system are
a) correctness, reliability
b) efficiency, usability, maintainability
c) testability, portability, accuracy, error tolerances, expandability, access control, audit
d) All of these
- (52) Maximum possible value of reliability is
a) 100
b) 10
c) 1
d) 0
- (53) Which one is not a quality standard?
a) CMM
b) Six Sigma
c) CMMI
d) COCOMO
- (54) is a measure of the frequency of occurrence with which unexpected behavior is likely to occur.
a) Probability of Failure on Demand (POFOD)
b) Mean Time Between Failure (MTBF)
c) Mean Time to Failure (MTTF)
d) Rate of Failure Occurrence (ROCOF)
- (55) SMI stands for
a) Software Mature Indicator
b) Software Maturity Index
c) Software Mature Index
d) Software Maturity Indicator
- (56) Which one of the following states that adequate statistical techniques are identified and used to verify the acceptability of process capability and product characteristics?
a) ISO 9001
b) ISO 9000-4
c) CMM
d) All of these
- (57) MTTR is
a) Mean time to repair
b) Minimum Time to repair
c) Maximum time to repair
d) Mid time to repair
- (58) Which of the following does not affect the software quality and organizational performance?
a) Market
b) Product
c) Technology
d) None of these
- (59) According to ISO 9001, the causes of nonconforming product should be
a) deleted
b) eliminated
c) identified
d) Both eliminated & identified
- (60) How is reliability and failure intensity related to each other?
a) Direct Relation
b) Inverse Relation
c) No Relation
d) Exponentially Increasing Relation

- (61) What is tested to uncover errors that indicate lack of conformance to customer requirements in the dimensions of quality?
- a) Structure
 - b) Function
 - c) Usability
 - d) Navigation
- (62) The intent of project metrics is:
- a) minimization of development schedule
 - b) for strategic purposes
 - c) assessing project quality on an ongoing basis
 - d) minimization of development schedule and assessing project quality on ongoing basis
- (63) Which of the following is an indirect measure of product?
- a) Quality
 - b) Complexity
 - c) Reliability
 - d) All of these
- (64) Quality planning is the process of developing a quality plan for
- a) team
 - b) project
 - c) customers
 - d) project manager
- (65) ----- is an "umbrella" activity that is applied throughout the software engineering process.
- a) Debugging
 - b) Testing
 - c) Designing
 - d) Software quality assurance
- (66) The ability to encourage the technical people to produce their best ability is known as _____.
- a) Organization
 - b) Motivation
 - c) Ideas or innovation
 - d) None of these
- (67) In software maintenance tackling the changes in the hardware and software environment where the software works, is called _____.
- a) Corrective
 - b) Perfective
 - c) Adaptive
 - d) Preventive
- (68) Which maintains software configuration?
- a) Software maintenance
 - b) Configuration management
 - c) Software re-engineering
 - d) Software refactoring
- (69) Software Maintenance includes
- a) Error corrections
 - b) Enhancements of capabilities
 - c) Deletion of obsolete capabilities
 - d) All of these
- (70) In software maintenance removing errors spotted by users is known as _____.
- a) Adaptive
 - b) Corrective
 - c) Perfective
 - d) Preventive