SOFTWARE ENGINEERING MCQS

1. What is the first step in the software development lifecycle?

A. System Design
B. Coding
C. System Testing
D. Preliminary Investigation and Analysis

2. What does the study of an existing system refer to?

A. Details of DFD
B. Feasibility Study
C. System Analysis
D. System Planning

3. Which of the following is involved in the system planning and designing phase of the Software Development Life Cycle (SDLC)?

A. Sizing
B. Parallel run
C. Specification freeze
D. All of the above

4. What is the major drawback of the Spiral Model?

A. Higher amount of risk analysis
B. Doesn't work well for smaller projects
C. Additional functionalities are added later on
D. Strong approval and documentation control

5. Model selection is based on _____.

A. Requirements

B. Development team & users

C. Project type & associated risk

D. All of the above

6. Which of the following models doesn't necessitate defining requirements at the earliest in the lifecycle?

A. RAD & Waterfall

B. Prototyping & Waterfall

C. Spiral & Prototyping

D. Spiral & RAD

7. Which of the following model will be preferred by a company that is planning to deploy an advanced version of the existing software in the market?

A. Spiral

B. Iterative Enhancement

C. RAD

D. Both (b) and (c)

8. Which of the following is the Characteristics of good software?

A. Transitional

B. Operational

C. Maintenance

D. **All of the above**

9. What are attributes of good software ?

A. Software functionality

B. Software development

C. Software maintainability

D. Both A and C

10. Which one of the following models is not suitable for accommodating any change?

A. Spiral Model
B. Prototyping Model
C. Incremental Model
D. Waterfall Model

11. Which one of the following is not a phase of Prototyping Model?

A. Quick Design
B. Coding
C. Prototype Refinement
D. Engineer Product

12. SDLC stands for

A. Software Development Life Cycle
B. System Development Life cycle
C. Software Design Life Cycle
D. System Design Life Cycle

13. Which two models doesn't allow defining requirements early in the cycle?

A. Waterfall
B. Prototyping & Spiral
C. Prototyping
D. Waterfall & Spiral

14. Which of the following life cycle model can be chosen if the development team has less experience on similar projects?

A. Spiral
B. Waterfall
C. RAD
D. Iterative Enhancement Model

15. Spiral Model has high reliability requirements.

A. True
B. False

16. What are the types of requirements ?

A. Availability
B. Reliability

C. Usability
D. All of the mentioned

17. Select the developer-specific requirement ?
A. Portability
B. Maintainability
C. Availability
D. Both Portability and Maintainability

18. FAST stands for
A. Functional Application Specification Technique
B. Fast Application Specification Technique
C. Facilitated Application Specification Technique
D. None of the mentioned

19. SRS stands for
A. System Register Software
B. Software Requirement System
C. Software Requirement Specification
D. None

20. Which one of the following is a functional requirement ?
A. Maintainability
B. Portability
C. Robustness
D. None of the mentioned

21. Which of the following property does not correspond to a good Software Requirements Specification (SRS) ?
A. Verifiable
B. Ambiguous
C. Complete
D. Traceable

22. Which of the following property of SRS is depicted by the statement : "Conformity to a standard is maintained" ?

A. Correct
B. Complete
C. Consistent
D. Modifiable

23. The SRS is said to be consistent if and only if

A. its structure and style are such that any changes to the requirements can be made easily while retaining the style and structure
B. every requirement stated therein is one that the software shall meet
C. every requirement stated therein is verifiable
D. no subset of individual requirements described in it conflict with each other

24. Which of the following statements about SRS is/are true ?

i. SRS is written by customer

ii. SRS is written by a developer

iii. SRS serves as a contract between customer and developer

A. Only i is true
B. Both ii and iii are true
C. All are true
D. None of the mentioned

25. Consider the following Statement: "The product should have a good human interface."What characteristic of SRS is being depicted here ?

A. Consistent
B. Non-Verifiable
C. Correct
D. Ambiguous

26. Which of the following word correctly summarized the importance of software design?

A. Quality
B. Complexity
C. Efficiency

D. Accuracy

27. The spiral model was originally proposed by
A. IBM
B. Barry Boehm
C. Pressman
D. Royce

28. How is Incremental Model different from Spiral Model?
A. Progress can be measured for Incremental Model
B. Changing requirements can be accommodated in Incremental Model
C. Users can see the system early in Incremental Model
D. All of the mentioned

29. What are the characteristics of software?
A. Software is developed or engineered; it is not manufactured in the classical sense.
B. Software doesn't " wear out ".
C. Software can be custom built or custom build.
D. All mentioned above

30. Compilers, Editors software come under which type of software?
A. System software
B. Application software
C. Scientific software
D. None of the above

31. You are working as a project manager. Your Company wants to develop a project. You are also involved in planning team. What will be your first step in project planning?
A. Establish the objectives and scope of the product.
B. Determine the project constraints.
C. Select the team.
D. None of the above.

32. What is a Software ?
A. Software is set of programs
B. Software is documentation and configuration of data
C. Both a and b

D. None of the mentioned

33. Which of these does not account for software failure ?
A. Increasing Demand
B. Low expectation
C. Increasing Supply
D. Less reliable and expensive

34. What are attributes of good software ?
A. Software maintainability
B. Software functionality
C. Software development
D. a and b

35. What is the main aim of Software engineering?
A. Reliable software
B. Cost effective software
C. Reliable and cost effective software
D. None of the above

36. Software deteriorates rather than wears out because
A. Software suffers from exposure to hostile environments
B. Defects are more likely to arise after software has been used often
C. Multiple change requests introduce errors in component interactions
D. Software spare parts become harder to order

37. Most software continues to be custom built because
A. Component reuse is common in the software world.
B. Reusable components are too expensive to use.
C. Software is easier to build without using someone else's components.
D. **Off-the-shelf software components are unavailable in many application domains.**

38. The nature of software applications can be characterized by their information
A. Complexity
B. content
C. determinacy
D. both b and c

39. Which of the following is an important characteristics of useful and effective information?

A. Accuracy
B. Timeliness
C. Completeness
D. All of these

40 In the Design phase, which is the primary area of concern?
A. Architecture
B. Data
C. Interface
D. All of the Mentioned

41 Which is the best coupling for good software?
A. Content Coupling
B. Data Coupling
C. Stamp Coupling
D. Control Coupling

42 Which is the best cohesion for good software?
A. Logical Cohesion
B. Procedural Cohesion
C. Temporal Cohesion
D. Functional Cohesion

43. Individual module testing is done By
A. Integration Testing
B. System Testing
C. Unit Testing
D. None of The Above

44. Which of the following is not a part of maintancance phase
A. Correction
B. Adaption
C. Security
D. Prevention

45. Which is the most important feature of Spiral Model
A. Quality Management
B. Risk Management
C. Performance Management
D. Efficience Management

46. Which of the following is not a diagram studied in Requirement Analysis ?
A. Use Cases
B. Entity Relationship Diagram
C. State Transition Diagram
D. Activity Diagram

47. Which of the following property does not correspond to a good Software Requirements Specification (SRS) ?
A Verifiable
B Ambiguous
C Complete
D Traceable

48. The SRS document is also known as _____ specification.

A black-box
B white-box
C grey-box
D none of the mentioned

49. Which one of the following is a requirement that fits in a developer's module ?
A Availability
B Testability
C Usability
D Flexibility

50. Actual programming of software code is done during the _____ step in the SDLC.
A. Maintenance and Evaluation
B. Design
C. Analysis
D. Devlopement and Documentation

51 Debugging is:
A. creating program code
B. finding and correcting errors in the program code
C. identifying the task to be computerized
D. creating the algorithm

52. The importance of software design can be summarized in a single word which is:

A Efficiency
B Accuracy
C Quality

D Complexity

53 _____ is a measure of the degree of interdependence between modules.
A Cohesion
B Coupling
C None of the mentioned
D All of the mentioned

54 Which of the following is the worst type of module coupling?
A Control Coupling
B Stamp Coupling
C External Coupling
D Content Coupling

55 A module having high cohesion and low coupling is known as _____
A Functional dependence
B Functional independence
C Sequential Independence
D Temporal Independence

56 Which of the following is not a type of cohesion?
A Coincidental
B Temporal
C Communication
D Modular

57 Which of the following has lowest Cohesion?
A Logical
B Coincidental
C Functional
D Procedural

58 Which among the following is correct order of cohesion from low to high?
A coincidental < logical < temporal < functional

B. coincidental < temporal < logical < functional

C. temporal < coincidental < logical < functional

D. coincidental > logical > temporal > functional

59 Two modules are _____ coupled if they share some global data items.
A. Common

B. stamp

C. content

D. Data

60 Top-down decomposition is followed in _____

A. function oriented design

B. object oriented design

C. both of the above

D. none of the above

61. How many type of symbols are used for constructing DFDs?

A. 7

B. 5

C. 6

D. 3

62. A Table or Data store in DFD is represented using _____

A. Rectangle

B. Square

C. Parallel Line

D. Circle

63. The mechanism that allows us to represent a problem in a simpler way by considering aspects relevant to purpose and omitting all other detail is known as _____

A. Inheritance

B. Abstraction

C. Aggregation

D. Polymorphism

64. Which of these comes under the Modularity principle?

A. Small modules

B. Coupling

C. Cohesion

D. **All of the mentioned**

302- Software Engineering-I

1. Software means _____.

Collection of programs only
Collection of data only
Collection of programs, data structure and associated documentation
None of the above

2. Pick the odd one out.

Windows XP
Flipcart.com
RAM
ERP

3. Which of the following is/are the characteristics of Software?
   (i) The software is engineered or developed, it is not manufactured in classical sense.
   (ii) The Software doesn't wear-out.
   (iii) Software is tangible whereas hardware is not tangible.

(i) Only i
(ii) Only ii
(iii) Both (i) and (ii)

4. The initial failure rate of _____ is high.

Both software & hardware
Only software
Only hardware
Neither software nor hardware

5. The failure rate of software spikes due to _____.

Errors in software
Change in software
Environmental maladies
Cost

6. Software doesn't wear-out, but it does _____.

Emerge
Become useless
Deteriorate
Reengineered

7. My people have state-of-art software development tools, after all we buy them a newest computers. Identify the type of myth.

Management myths
Customer myths
Practitioner's myths
User's myth

8. Project requirement continually change, but change can be easily accommodated because software is flexible. Identify the type of myth.

Management myths
Customer myths
Practitioner's myths
User's myth

9. Once we write the program and get it to work, our job is done. Identify the type of myth.

Management myths
Customer myths
Practitioner's myths
User's myth

10. The base that supports the software engineering is a _____ layer.

Tools
Methods
Process
Quality focus

11. Which of the following is/are the goals of software engineering?

(i) Reduce cost and time for software development.
(ii) Developing high quality software.

(i) Only
(ii) Only
Both (i) and (ii)
None of these

12. Which of the following is correct order for generic framework activities?

Development, Definition, Support
Definition, Development, Support
Support, Definition, Development
Definition, Support, Development

13. Adding new features in the existing software is known as _____.
Prevention
Enhancement
Correction
Adaption

14. Waterfall Process Model can be used for software development when the _____
Requirements are not known
New system is to be developed
Requirements are well understood
None of the above

15. Which of the following model is appropriate to accommodate changes?
Waterfall model
Prototype model
Both a & b
None of the above

16. Prototype model is _____.
Iterative
Linear
Sequential
None of the above

17. The notation “Define before Design and Design before Code” is justified for which model?
Prototype model
WINWIN model
RAD model
Waterfall Model

18. _____ is the most critical factor affecting the quality of the software.
Analysis
Design
Coding
Testing

19. The _____ model helps software engineer and customer to better understand the requirements.
Prototype
Waterfall
Rapid application development
Incremental model

20. Which model suggests a sequential approach to software development?

Prototype model

Waterfall Model

WINWIN model

RAD model

21. QFD stands for:
    Quality Function Deployment
    Quality Function Development
    Quality Financial Deployment
    Quick Function Deployment

22. The absence of _____ type of requirements in QFD will be a cause of dissatisfaction.
    Normal
    Expected
    Exciting
    None of these

23. Which of the following is the core of the analysis model?
    ER-Diagram
    Data Dictionary
    Data Flow Diagram
    Control Diagram

24. A description of each function in Data Flow Diagram is presented by _____.
    Data Object Description
    Control Specification
    Process Specification
    Data Dictionary

25. Level '0' DFD is also called _____.
    Context level DFD
    Conceptual level DFD
    All of the above
    None of the above

26. _____ Component of SRS specify the expected behavior of the system.
    Functional Requirements
    Performance Requirements
    Design constraints imposed on an implementation
    External interfaces

27. Which of the following is not a characteristic of an SRS?
    Complete
    Correct
    Ambiguous
    Traceable

28. Which of the following model(s) is/are iterative?
Prototype
Incremental
Spiral
All of the above

29. Which of the following is not part of design model?
Data design
Procedural Design
E-R Diagram
Architectural design

30. Which of the following is not a design principle?
The design should not suffer from tunnel vision.
The design should not be traceable to analysis model.
The design should not reinvent the wheel.
The design should exhibit uniformity and integration.

31. Which of the following formula is true with regards to modularity?
E(P1 + P2) > E(P1) + E(P2)
E(P1 + P2) < E(P1) + E(P2)

32. If number of modules increases then the total software cost increases due to cost of _____.
Development
Integration
Testing
Design

33. Which model address behavioral aspect of program structure?
Structural model
Framework model
Dynamic model
Process model

34. _____is a measure of the number of modules that are directly controlled by another module.
Fan-out
Fan-in

35. Functional independence is direct outgrowth of,
Abstraction, refinement and program structure
Modularity, abstraction and software procedure
Modularity, abstraction and information hiding

36. Independence is measured using which qualitative criteria.
Cohesion
Coupling
Both

Neither of them

37. Which of the following coupling is best?
Control
External
Content
Data

38. _____ is the strongest cohesion.
Sequential
Functional
Coincidental
Procedural

39. If and while statement in some programming language is an example of _____ abstraction.
Data
Procedural
Control

40. _____ and _____ are the input for data design from analysis model.
DFD, DD
DD, STD
ERD, DD
DFD, SPEC

1. In DFD, which symbol is used to show an external entity?
   a. Arrow
   b. Circle
   c. Pentagon
   d. Rectangle
   ANS: d
2. FAST stands for
   a. Facilitated Application Software Technique
   b. Functional Application Software Technique
   c. Facilitated Application Specification Technique
   d. None of These
   ANS: c
3. The process of developing a software product using software engineering principles and methods is referred to as
   a. Software myths
   b. Scientific Product
   c. Software Development
   d. None of above
   ANS: c
4. Which of the following is a tool in design phase?
   a. Abstraction
   b. Refinement
   c. Information Hiding
   d. All of these
   ANS: d
5. The major shortcomming of waterfall model is :
   a. the maintenance of system
   b. The system testing
   c. The difficult in accommodating changes after feasibility analysis
   d. The difficult in accommodating changes after requirement analysis
   ANS: a
6. What is Software requirement?
   a. It is nothing but customer need
   b. it is specification that customer wants in the proposed software
   c. it is minimum functionality of the software
   d. it is used for testing
   ANS: b
7. What is full form of SRS?
   a. Software Readiness system
   b. Software Requirement Specification
   c. Software Repair and Simplification
   d. Software Remedy and Specification
   ANS: b
8. What is questionnaire?
   a. It is list of requirements
   b. It is list of wants
   c. It is list of questions/queries
   d. None of these
   ANS: c
9. The relationship of data elements in a module is called
   a. Coupling
   b. Modularity
   c. Cohesion
   d. Granularity
   ANS: a

10. Which level of DFD highlights the system as a whole?
    a. First Level
    b. Context Level
    c. Second Level
    d. None of these
    ANS: b
11. Project risk factor is considered in which model
    a. Spiral Model
    b. Waterfall Model
    c. Prototyping Model
    d. None of the above
    ANS: a
12. A desirable property of module is
    a. Independency
    b. Low cohesion
    c. High Coupling
    d. Multifunctional
    ANS: b
13. There are different phase available in SDLC. Find out which phase is not available in software life cycle?
    a. Coding
    b. Testing
    c. Maintenance
    d. Abstraction
    ANS: d
14. Applications software
    a. is used to control the operating
    b. Includes programs designed to help programs
    c. Performs a specific task for computer users
    d. None of these
    ANS: c
15. Software does not wear-out in the traditional sense of the term, but software does tend to deteriorate as it evolves, because :
    a. Software suffers from exposure to hostile environments
    b. Multiple change requests introduce errors in component interactions
    c. Defects are more likely to arise after software has been used often
    d. Software spare parts become harder to order.
    ANS: b
16. Which of the following terms describes testing?
    a. Finding broken code
    b. Evaluating deliverable to find errors
    c. A stage of all projects
    d. None of above
    ANS: b
17. What are the different levels of Testing
    a. Integration Testing
    b. Unit Testing
    c. System Testing
    d. All of Above
    ANS: d
18. Cyclomatic complexity is
    a. White-box Testing
    b. Black box Testing
    c. Grey box Testing
    d. All of the above
    ANS: a

19. _____is not suited to accommodate any change.
    a. Spiral Model
    b. Prototyping Model
    c. Incremental Model
    d. Waterfall Model
    ANS: d
20. Which of the following techniques emphasizes breaking large and complex task into successively smaller sections?
    a. Object Oriented Programming
    b. Micro Programming
    c. Partitioning
    d. Abstraction
    ANS: c

1.Which of the following term describes testing?
a) Finding broken code
b) Evaluating deliverable to find errors
c) A stage of all projects
d) None of the mentioned

2.What is Cyclomatic complexity?
a) Black box testing
b) White box testing
c) Yellow box testing
d) Green box testing

3.Alpha testing is done at
a) Developer's end
b) User's end
c) Developer's & User's end
d) None of the mentioned

4.The testing in which code is checked
a) Black box testing
b) White box testing
c) Red box testing
d) Green box testing

5.Acceptance testing is also known as
a) Grey box testing
b) White box testing
c) Black box Testing
d) Beta testing

6.Which of the following is non-functional testing?
a) Black box testing
b) Performance testing
c) Unit testing
d) None of the mentioned

7.Beta testing is done at
a) User's end
b) Developer's end
c) User's & Developer's end
d) None of the mentioned

8.Unit testing is done by
a) Users
b) Developers
c) Customers
d) None of the mentioned

9.Behavioral testing is
a) White box testing
b) Black box testing
c) Grey box testing
d) None of the mentioned

10.Which of the following is black box testing
a) Basic path testing
b) Boundary value analysis
c) Code path analysis
d) None of the mentioned

11.In which testing level the focus is on customer usage?
a) Alpha Testing
b) Beta Testing
c) Validation Testing
d) Both Alpha and Beta

12.Software Testing with real data in real environment is known as
a) alpha testing
b) beta testing
c) regression testing
d) none of the mentioned

13.What is testing process' first goal?
a) Bug prevention
b) Testing
c) Execution
d) Analyses

14.Which is a black box testing technique appropriate to all levels of testing?
a) Acceptance testing
b) Regression testing
c) Equivalence partitioning
d) Quality assurance

15.Effective testing will reduce _____ cost.
a) maintenance
b) design
c) coding
d) documentation

16.In which testing level the focus is on customer usage?
a) Alpha Testing
b) Beta Testing
c) Validation Testing
d) Both Alpha and Beta

17.Unit testing is done by
a) Users
b) Developers
c) Customers
d) None of the mentioned

18.Which of the following is non-functional testing?
a) Black box testing
b) Performance testing
c) Unit testing
d) None of the mentioned

19.Alpha testing is done at
a) Developer's end
b) User's end
c) Developer's & User's end
d) None of the mentioned

20.validation is done by
a) Users
b) Developers
c) Tester
d) None of the mentioned

21.Verification is done by
a) Customers
b) Developers
c) Both users & developer
d) None of the mentioned

22.Which is the Best approch or method of changeover?
a) Dual system method
b) Direct method
c) Parallel method
d) Pilot apporoch

23.Dual system method also known as_____.
a) Direct system method
b) Parrallel system method
c) Pilot system method
d) Phase in method

24.White Box Testing also known as _____.
a) Glass box testing
b) Open box testing
c) Clear box testing
d) All mentioned above

25.Black Box Testing also known as _____.

a) Closed box testing

b) Behavioral testing

c) Functional testing

d) All mentioned above