Principles of Software Engineering

Objective Type Questions

1. From the following which quality deals with maintaining the quality of the software product?

a. Quality assurance **b.** Quality control
c. Quality efficiency **d.** None of the above

2. **Function-oriented design is comprised of many smaller sub-systems is known as, Functions.**

a. Yes **b.** No

3. **State if the followings are true or false.**
For scheduling a project, it is necessary to:
1) Break down the project tasks into smaller, manageable form.
2) Find out various tasks and correlate them.
3) Estimate time frame required for each task.
4) Divide time into work-units.

a. True **b.** False

4. **Software project manager is engaged with software management activities. He is responsible for _____ .**

a. Project planning. **b.** Monitoring the progress
c. Communication among stakeholders **d.** All mentioned above
e. None of the above

5. **Software is not considered to be collection of executable programming code, associated libraries and documentations.**

a. True **b.** False

6. **Which quality deals with the maintaining the quality of the software product?**
a. Quality assurance **b.** Quality control
c. Quality Efficiency **d.** None of the above

7. **Which of these primary objectives have to be achieved for the requirement model?**
a. To describe what the customer requires
b. To establish a basis for the creation of a software design
c. To define a set of requirements that can be validated once the software
d. All mentioned above

8. **In a risk-based approach the risks identified may be used to:**
i. Determine the test technique to be employed
ii. Determine the extent of testing to be carried out
iii. Prioritize testing in an attempt to find critical defects as early as possible.
iv. Determine the cost of the project
a. ii is True; i, iii, iv and v are False **b.** i,ii,iii are true and iv is false
c. ii and iii are True; i, iv are False **d.** ii, iii and iv are True; i is false

9. **The Test Cases Derived from use cases _____ .**

a. Are most useful in uncovering defects in the process flows during real world use of the system.
b. Are most useful in uncovering defects in the process flows during the testing use of the system.
c. Are most useful in covering the defects in the process flows during real world use of the system.
d. Are most useful in covering the defects at the Integration Level.

10. **Alpha and Beta Testing are forms of _____ .**

a. Acceptance testing **b.** Integration testing
c. System Testing **d.** Unit testing

11. **The model in which the requirements are implemented by its category is _____ .**

a. Evolutionary Development Model **b.** Waterfall Model
c. Prototyping **d.** Iterative Enhancement Model

12. **A COCOMO model is _____ .**

a. Common Cost Estimation Model. **b.** Constructive Cost Estimation Model.
c. Complete Cost Estimation Model. **d.** Comprehensive Cost Estimation Model

13. **SRD stands for _____ .**

a. Software Requirements Definition **b.** Structured Requirements Definition
c. Software Requirements Diagram **d.** Structured Requirements Diagram

14. **The tools that support different stages of software development life cycle are called _____ .**

a. CASE Tools **b.** CAME tools
c. CAQE tools **d.** CARE tools

15. **Software consists of _____ .**

a. Set of instructions + operating procedures
b. Programs + documentation + operating procedures
c. Programs + hardware manuals
d. Set of programs

16. **Which is the most important feature of spiral model?**

a. Quality management **b.** Risk management
c. Performance management **d.** Efficiency management

17. **If every requirement stated in the Software Requirement Specification (SRS) has only one interpretation, SRS is said to be correct _____ .**

a. Unambiguous **b.** Consistent
c. Verifiable **d.** None of the above

18. **Which is not a step of Requirement Engineering?**

a. Requirements elicitation **b.** Requirements analysis
c. Requirements design **d.** Requirements documentation

19. **The level at which the software uses scarce resources is _____ .**

a. Reliability **b.** Efficiency
c. Portability **d.** All of the above

20. **If every requirement can be checked by a cost-effective process, then the SRS is _____ .**

a. Verifiable **b.** Traceable
c. Modifiable **d.** Complete

21. **Number of clauses used in ISO 9001 to specify quality system requirements are _____ .**

a. 15 **b.** 20
c. 25 **d.** 28

22. **One of the fault base testing techniques is _____ .**

a. Unit Testing **b.** Beta Testing
c. Stress Testing **d.** Mutation Testing

23. **Which is the way where the CMMI process meta model can be represented?**

a. A continuous model **b.** A staged model
c. Both A & B **d.** None of the above

24. **Spiral model is a combination of both Iterative model and one of the SDLC model.**

a. True **b.** False

25. **In Re-engineering process which concepts in order to get re-engineered software?**

a. Apply forward engineering **b.** Perform
c. Decide **d.** Re-structure program

26. **System size is a metric for the analysis model.**

a. True **b.** False

27. **Requirements can be checked against following conditions.**

1) If they cannot be practically implemented.
2) If they are not valid and as per functionality and domain of software.
3) If there are no ambiguities.

a. True **b.** False

28. **An effective risk management plan will need to address which of the following issues?**

a. Risk avoidance **b.** Risk monitoring
c. Contingency planning **d.** All mentioned above

29. **Knowledge of software program, design and structure is essential in _____ .**

a. Black-box testing **b.** White-box testing
c. Integration testing **d.** None of the above

30. **Function oriented metric were first proposed by _____ and he suggested a measure called the _____ .**

a. Barry Boehm, KLOC. **b.** Barry Boehm, Function point.
c. Albrecht, Function point. **d.** Albrecht, KLOC.

31. **Line of code(LOC) can be used to normalize quality and/or productivity measure for _____ .**

a. Extended function point metrics **b.** Function point metrics.
c. Size oriented metrics. **d.** None of the above.

32. **Match the following List 1 with List 2:**

a. Good quality ----- i. Program does not fail for a specified time in a given environment
b. Correctness ------- ii. Meets the functional requirements
c. Predictable -------- iii. Meets both functional and non-functional requirements
d. Reliable ---------- iv. Process is under statistical control Codes

a. a - iii, b - ii, c - iv, d – i **b.** a - ii, b - iii, c - iv, d - i
c. a - i, b - ii, c - iv, d – iii **d.** a - i, b - ii, c - iii, d – iv

33. **Software when made for a specific requirement is called, Software Product.**

a. Yes **b.** No

34. **The software design paradigm is a part of software development and it includes _____ .**

a. Design, Maintenance, Programming **b.** Coding, Testing, Integration
c. Requirement gathering, Software design, Programming
d. None of the above

35. **The New modules, that are need to be replaced or modified, and they are also designed against requirement specifications set in the previous stage is _____ .**

a. Acceptance testing **b.** System Testing
c. Delivery **d.** Design

36. **In software maintenance removing errors spotted by users is known as _____.**

a. Adaptive **b.** Corrective
c. Perfective **d.** Preventive

37. **A good structured design has low cohesion and high coupling arrangements.**
a. True **b.** False

38. **_____ is a piece of programming code which performs a well defined task.**
a. Computer Program **b.** Computer Software
c. Both A & B **d.** None of the above

39. **In software metrics which metrics evaluate the track budget, schedule and human resource?**

a. Requirement metrics **b.** Product metrics
c. Process metrics **d.** None of the above

40. **When multiple modules have read and write access to some global data, it is called, _____ .**

a. Content coupling **b.** Stamp coupling
c. Data coupling **d.** Common coupling

41. **How many characteristics does Value Adjustment Factor(VAF) in Function Point Analysis have?**

a. 11 **b.** 12
c. 13 **d.** 14

42. **Which of the following techniques is not a White box technique?**

a. Statement Testing and coverage **b.** Decision Testing and coverage
c. Condition Coverage **d.** Boundary value analysis

43. **The desired level of coupling is _____ .**

a. No coupling **b.** Control coupling
c. Common coupling **d.** Data coupling

44. **Coupling and cohesion can be represented using a _____ .**

a. cause-effect graph **b.** dependence matrix
c. Structure chart **d.** SRS

45. **Changes are made to the system to reduce the future system failure chances is called _____ .**

a. Preventive Maintenance **b.** Adaptive Maintenance
c. Corrective Maintenance **d.** Perfective Maintenance

46. **The feature of the object oriented paradigm which helps code reuse is _____ .**

a. Object **b.** Class
c. Inheritance **d.** Aggregation.

47. **Cost of Production = Right The First time cost (RTF +----------) .**

a. Cost of Deployment **b.** Cost of Quality
c. Cost of maintenance **d.** Cost of Production

48. **When elements of module are grouped because the output of one element serves as input to another and so on, it is called _____ .**

a. Functional cohesion **b.** Sequential cohesion
c. Communicational cohesion **d.** Procedural cohesion

49. **A good design review is not important for good software design and its accuracy and quality.**

a. True **b.** False

50. **Which is the characteristics of Software risk?**

a. Uncertainty **b.** Loss
c. Both A & B **d.** None of the above

51. **Data flow diagram is a graphical representation of flow of data in an information system.**

a. True **b.** False

52. **To compute Function Point (FP) which of the following relationship is used? Where Fi = complexity adjustment values.**

a. FP = count total *[0.01 *S(Fi)]
b. FP = count total *[0.65 + 0.01 *S(Fi)]
c. FP = count total *[0.65]
d. None of the above.

53. **Which SDLC activity does the user initiates the request for a desired software product?**

a. Requirement gathering **b.** Implementation
c. Disposition **d.** Communication

54. **Which coupling is also known as "Global coupling"?**

a. Content coupling **b.** Stamp coupling
c. Data coupling **d.** Common coupling

55. **Which risks identify Potential Design, Implementation, Interface, Verification and Maintenance Problems?**

a. Project risk **b.** Business risk
c. Technical risk **d.** Schedule risk

56. **Abbreviate the term CMMI.**

a. Capability Maturity Model Integration
b. Capability Model Maturity Integration
c. Capability Maturity Model Instructions
d. Capability Model Maturity Instructions

57. **First level of prototype is evaluated by _____ .**

a. Developer **b.** Tester
c. User **d.** System Analyst

58. **Line of code(LOC) of the product comes under which type of measures?**

a. Indirect measures **b.** Direct measures
c. Coding **d.** None of the above.

59. **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

60. **Which is the Estimation Software size should be known?**

a. Time estimation **b.** Effort estimation
c. Cost estimation **d.** Software size estimation

61. **How many numbers of maturity levels in CMM are available?**

a. 3 **b.** 4
c. 5 **d.** 6

62. **Software Requirement Specification should come up with following features:**

1) User Requirements are expressed in natural language.
2) Technical requirements are expressed in structured language, which is used

inside the organization.
3) Design description should be written in Pseudo code.

a. True **b.** False

63. **Grouping of all functionally related elements is known as _____ .**

a. Cohesion **b.** Coupling
c. Both A & B **d.** None of the above

64. **Design phase is followed by _____ .**

a. Coding **b.** Testing
c. Maintenance **d.** None of the above.

65. **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