Software Engineering MCQs

1. Software is defined as \_\_\_\_\_\_\_\_\_\_\_  
   a) set of programs, documentation & configuration of data  
   b) set of programs  
   c) documentation and configuration of data  
   d) None of the mentioned

Answer: a  
Explanation: Software is a collection of programmes; it also includes documentation and data setup to enable the programmes to function. Microsoft windows, excel, word, powerpoint, etc. are a few examples of software.

1. What is Software Engineering?  
   a) Designing a software  
   b) Testing a software  
   c) Application of engineering principles to the design a software  
   d) None of the above

Answer: c  
 Explanation: Software engineering is the application of engineering principles to the design, development, and support of software and it helps to solve the challenges of low-quality software projects.

1. Who is the father of Software Engineering?  
   a) Margaret Hamilton  
   b) Watts S. Humphrey  
   c) Alan Turing  
   d) Boris Beizer

Answer: b  
Explanation: Watts S. Humphrey created the Software Process Program at Carnegie Mellon University’s Institute (SEI) in the 1980s, and served as its director from 1986 through the early 1990s. This program was designed to help participants understand and manage the software developement process.

1. What are the features of Software Code?  
   a) Simplicity  
   b) Accessibility  
   c) Modularity  
   d) All of the above

Answer: c  
Explanation: Software code should be written in a clear, succinct, and easy-to-understand way. Simplicity should be preserved in the program code’s organization, implementation, and design. These codes should be constructed in such a way that software components (such as files and functions) are readily available. The software may be broken down into numerous parts to make it easier to comprehend and troubleshoot.

1. \_\_\_\_\_\_\_\_\_\_\_\_ is a software development activity that is not a part of software processes.  
   a) Validation  
   b) Specification  
   c) Development  
   d) Dependence

Answer: d  
Explanation: A software dependency is an external independent library that can range in size from a single file to numerous files and directories arranged into packages to accomplish a specified purpose and is an attribute and not an engineering activity for process.

1. Define Agile scrum methodology.  
   a) project management that emphasizes incremental progress  
   b) project management that emphasizes decremental progress  
   c) project management that emphasizes neutral progress  
   d) project management that emphasizes no progress

Answer: a  
Explanation: Agile scrum methodology is a style of project management that emphasizes incremental progress. Each iteration is divided into two to four-week sprints, with the goal of completing the most important features first and delivering a possibly deliverable product at the end of each sprint.

7. Attributes of good software is \_\_\_\_\_\_\_\_\_\_\_\_  
a) Development  
b) Maintainability & functionality  
c) Functionality  
d) Maintainability

Answer: b  
Explanation: Good software should provide the functionality and maintainability that are necessary. Software development is a must, not an option. Along with this software also additional attributes like usability, efficiency, reliability, accuracy, robustness, integrity, etc.

8. What does SDLC stands for?  
a) System Design Life Cycle  
b) Software Design Life Cycle  
c) Software Development Life Cycle  
d) System Development Life cycle

Answer: c  
Explanation: The Software Development Life Cycle (SDLC) is a method for designing, developing, and testing high-quality software. The software developed to meet or exceed customer expectations must have an SDLC designed to complete the software on time and on budget.

9. Who proposed the spiral model?  
a) Barry Boehm  
b) Pressman  
c) Royce  
d) IBM

Answer: a  
Explanation: The spiral model by Boehm, is a software process model that combines prototyping’s iterative characteristic with the linear sequential model’s regulated and systematic elements. It implements the capability of quick production of new software versions.

10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is not among the eight principles followed by the Software Code of Ethics and Professional Practice.  
a) PRODUCT  
b) ENVIRONMENT  
c) PUBLIC  
d) PROFESSION

Answer: b  
Explanation: The rest are software ethical provisions; the environment does not focus on individual clauses or their importance in relation to the topic. The eight principles that should be followed by the Software code is:  
1. PUBLIC  
2. CLIENT AND EMPLOYER  
3. PRODUCT  
4. JUDGMENT  
5. MANAGEMENT  
6. PROFESSION  
7. COLLEAGUES  
8. SELF

11. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ suits the Manifesto for Agile Software Development.  
a) Customer collaboration  
b) Individuals and interactions  
c) Working software  
d) All of the mentioned

Answer: d

12. What are agile manifesto principles?  
a) Customer satisfaction  
b) Face-to-face communication within a development team  
c) Changes in requirements are welcome  
d) All of the mentioned

Answer: d  
Explanation: Principles of the agile manifesto are:  
i) Customer satisfaction is a priority.  
ii) Changes in requirements are welcome, if they occur late in the development process.  
iii) Deliver working software on a regular basis.  
iv) Business people and developers must connect on a daily basis through the project.  
v) Support people who are interested and passionate about developing.  
vi) Face-to-face communication within a development team.  
vii) Working software indicates progress.  
viii) Sustainable development is aided by agile processes.  
ix) A constant focus on technical excellence and smart design improve agility.  
x) Simplicity, or the art of minimizing the amount of effort that isn’t done, is critical.  
xi) Self-organizing teams  
xii) The team reflects on how to become more effective at regular intervals, then selects its behavior accordingly.

13. \_\_\_\_\_\_\_\_\_ is a software development life cycle model that is chosen if the development team has less experience on similar projects.  
a) Iterative Enhancement Model  
b) RAD  
c) Spiral  
d) Waterfall

Answer: c  
Explanation: For many applications, relying on risk assessment/analysis gives more freedom than is necessary, overcoming the requirements of less experienced developers.

14. Agile Software Development is based on which of the following type?  
a) Iterative Development  
b) Incremental Development  
c) Both Incremental and Iterative Development  
d) Linear Development

Answer: c  
Explanation: The software is built in increments, with the client stating the criteria to be included in each increment, and the top goal is to please the customer by delivering valuable software early and frequently. They’re iterative because they work on one iteration before moving on to the next.

15. Engineers developing software should not  
a) be dependent on their colleagues  
b) maintain integrity and independence in their professional judgment  
c) not knowingly accept work that is outside your competence  
d) not use your technical skills to misuse other people’s computers

Answer: a

16. \_\_\_\_\_\_\_\_\_\_ is not suitable for accommodating any change?  
a) RAD Model  
b) Waterfall Model  
c) Build & Fix Model  
d) Prototyping Model

Answer: b  
Explanation: Real-world projects seldom follow the Waterfall Model’s proposed sequential sequence. A Sequential model is an example of a waterfall model. The software development activity is split into several phases in this paradigm, with each phase consisting of a sequence of activities and having different goals.

17. Adaptive Software Development(ASD) has which of the following three framework activities?  
a) speculation, collaboration, learning  
b) analysis, design, coding  
c) requirements gathering, adaptive cycle planning, iterative development  
d) all of the mentioned

Answer: a

18. What is system software?  
a) computer program  
b) Testing  
c) AI  
d) IOT

Answer: a  
Explanation: System software is a sort of computer program that manages the hardware and applications on a computer. They are of three types: This is the operating system. This is a language processor. Software that is useful.

19. Which of the following document contains the user system requirements?  
a) SRD  
b) DDD  
c) SDD  
d) SRS

Answer: d  
Explanation: A software requirements specification (SRS) is a detailed explanation of how a system should behave before it is built. It may also include a collection of use cases that explain how users will interact with the programme.

20. In which step of SDLC actual programming of software code is done?  
a) Development and Documentation  
b) Maintenance and Evaluation  
c) Design  
d) Analysis

Answer: a  
Explanation: The documentation explains the functions of the final product. The developer must discover adequate knowledge in the technical documentation to begin coding.

21. Software Debugging is known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
a) identifying the task to be computerized  
b) creating program code  
c) creating the algorithm  
d) finding and correcting errors in the program code

Answer: d  
Explanation: Software Debugging is the systematic process of identifying and decreasing the number of bugs or faults in a computer program or a piece of electrical gear so that it behaves as intended.

22. The word which describes the importance of software design is?  
a) Complexity  
b) Quality  
c) Efficiency  
d) Accuracy

Answer: b  
Explanation: The degree to which software complies with or adheres to a particular design based on functional requirements or specifications is referred to as functional quality.

23. What is the first step of requirement elicitation ?  
a) Identifying Stakeholder  
b) Listing out Requirements  
c) Requirements Gathering  
d) All of the mentioned

Answer: a  
Explanation: Stakeholders are the one who will invest in and use the product, so its essential to chalk out stakeholders first.

24. Starting from least to most important, choose the order of stakeholder.  
i. Managers  
ii. Entry level Personnel  
iii. Users  
iv. Middle level stakeholder  
a) i, ii, iv, iii  
b) i, ii, iii, iv  
c) ii, iv, i, iii  
d) All of the mentioned

Answer: c  
Explanation: Users are your customers, they will be using your product, thus making them most important of all.

25. What are the types of requirement in Quality Function Deployment(QFD) ?  
a) Known, Unknown, Undreamed  
b) User, Developer  
c) Functional, Non-Functional  
d) Normal, Expected, Exciting

Answer: d  
Explanation: According to QFD, Normal, Expected and Exciting requirements maximizes customer satisfaction from the Software Engineering Process.

26. Why is Requirements Elicitation a difficult task ?  
a) Problem of scope  
b) Problem of understanding  
c) Problem of volatility  
d) All of the mentioned

Answer: d  
Explanation: Users specify unnecessary technical detail that may confuse, rather than clarify overall system objectives.Also, the customers/users are not completely sure of what is needed, have a poor understanding of the capabilities and limitations of their computing environment and they do not understand that the requirements change over time.

27. How many phases are there in Scrum ?  
a) Two  
b) Three  
c) Four  
d) Scrum is an agile method which means it does not have phases

Answer:b  
Explanation: There are three phases in Scrum.The initial phase is an outline planning phase followed by a series of sprint cycles and project closure phase.

28. Which of the following does not apply to agility to a software process?  
a) Uses incremental product delivery strategy  
b) Only essential work products are produced  
c) Eliminate the use of project planning and testing  
d) All of the mentioned

Answer:c  
Explanation: Testing is a major part of each software development process which can’t be avoided.

29. Which of the following UML diagrams has a static view?  
a) Collaboration  
b) Use case  
c) State chart  
d) Activity

Answer: b  
Explanation: A use case diagrams captures only the functionality of the system whereas a dynamic model/view captures the functions as well as the action.

30. Which diagram in UML shows a complete or partial view of the structure of a modeled system at a specific time?  
a) Sequence Diagram  
b) Collaboration Diagram  
c) Class Diagram  
d) Object Diagram

Answer: d  
Explanation: An object diagram focuses on some particular set of object instances and attributes, and the links between the instances. It is a static snapshot of a dynamic view of the system.

31. Which of the following diagram is time oriented?  
a) Collaboration  
b) Sequence  
c) Activity  
d) None of the mentioned

Answer: b

32. **Agile Modeling(AM) provides guidance to practitioner during which of these software tasks?**  
**A).** Analysis  
**B).** Design  
**C).** Testing  
**D).** Both A and B

Answer: d

**33. Which of the followings is a characteristics of agile development?**  
**A).** Implement the simplest solution to meet today's problem  
**B).** Shared code ownership  
**C).** Continual feedback from customer  
**D).** Test-driven development

Answer: d

34. **\_\_\_\_\_ is not an agile method.**  
**A).** Waterfall  
**B).** Crystal Clear  
**C).** Scrum  
**D).** Extreme Programming

Answer: a

35. **Which of the following is the type of aglie methodologies?**  
**A).** DSDM  
**B).** Scrum  
**C).** FDD  
**D).** All of the above

Answer: d

36. **Which of the following is the disadvantage of aglie methodology?**  
**A).** In agile methodology, documentation and designing take a back seat  
**B).** Speedy and continuous delivery of the software ensures customer satisfaction  
**C).** It facilitates close interaction between business people and developers  
**D).** All of the above

Answer: a

37. Model selection is based on \_\_\_\_\_\_\_\_\_\_.

1. Requirements
2. Development team & users
3. Project type & associated risk
4. All of the above

Answer: d

38. Which of the following activities of the generic process framework delivers a feedback report?

1. Deployment
2. Planning
3. Modeling
4. Construction

Answer: a

39. Which of the following refers to internal software equality?

1. Scalability
2. Reusability
3. Reliability
4. Usability

Answer: b

40. What is the name of the approach that follows step-by-step instructions for solving a problem?

1. An Algorithm
2. A Plan
3. A List
4. Sequential Structure

Answer: a