- 1. Compare Coupling and Cohesion. Explain different types of Coupling and its effects on software modules
- 2. List out the different characteristics of good UI design. List the desirable characteristic that a good user interface should possess.
- 3. With a neat sketch, draw the dimensions of the design model.
- 4. Mention the three key reasons that software architecture is important
- 5. WebApp patterns can be categorized using the levels of design focus. Mention the levels.
- 6. State the essential features of ISO 9000 certification. Write down the merits and demerits of ISO 9001:2000 certification
- 7. What is the significance and importance of CMM certification for any software organization? Is it possible for an organization to achieve higher level of CMM without achieving a lower one? Justify.
- 8. Suppose an organization mentions in its job advertisement that it has been assessed at level 3 of SELCMM, what can you infer about the current quality practices at the organization? What does this organization have to do to reach SELCMM level 4?
- 9. Is it ethical for a software engineer to agree to deliver a software system with known faults to a customer? Does it make any difference if the customer is told of the existence of these faults in advance? Would it be reasonable to make claims about the reliability of the software in such circumstances?
- 10. Define the term: error, fault and failure and describe how they relate to each other
- 11. What is software testing and why is it required? Explain the general guidelines for performing software testing? Differentiate between Black-Box testing and Structural (White-Box) Testing. What are the types of White-Box testing? Explain the step by step procedure to calculate the cyclomatic complexity
- 12. Distinguish between error and failure in terms of Software Defect? Which of the two is detected by Software testing? Justify your answer. Is it possible to test the software exhaustively? Justify your answer. Can anyone guarantee that the product delivered is 100% error free even after thorough testing?
- 13. What do you mean by LIP, CFG and McCabe's cyclometric metric? How to find each one of them? How are they related? Explain by taking a suitable example.
- 14. Which are the activities performed by Quality Assurance (QA) Department? Briefly explain.
- 15. What is FTR? List out the objectives of it? Describe design walk through and code walkthrough. Explain critical design review
- 16. Schematically draw the architecture of a CASE environment and explain how the different tools are integrated
- 17. What is a component? Explain object-oriented view of a component in brief. Explain the concept of Component based Software engineering (CBSE). Also explain the role of Agile (process model) in it. How is Agile differ from the other process model
- 18. Short note • SaaS Architecture
- 19. What is project management plan? Explain the four major sections that form the software project management plan (SPMP)
- 20. What do you mean by version control? What do you mean by Change control? What is the relationship between Software configuration management (SCM) and Software maintenance? Explain in brief.
- 21. Quality, Reliability and safety are related concepts, but are fundamentally different in number of ways. Discuss. Also explain.

- **22.** To achieve agility, a set of agility principles needs to be followed. If yes, mention the agility principles. If no, justify the answer.
- 23. If members of the software team are to drive the characteristics of the process that is applied to build software, mention the key traits that must exist among the people on an agile team and the team itself.
- 24. Enlist the other Agile Process models and explain any two in detail
- **25.** Compare Coupling and Cohesion. Explain different types of Coupling and its effects on software modules
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- 31. What is the significance and importance of CMM certification for any software organization? Is it possible for an organization to achieve higher level of CMM without achieving a lower one? Justify.
- 32. Suppose an organization mentions in its job advertisement that it has been assessed at level 3 of SEI CMM, what can you infer about the current quality practices at the organization? What does this organization have to do to reach SEI CMM level 4?
- 33. Is it ethical for a software engineer to agree to deliver a software system with known faults to a customer? Does it make any difference if the customer is told of the existence of these faults in advance? Would it be reasonable to make claims about the reliability of the software in such circumstances?
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