



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY :: PUTTUR
(AUTONOMOUS)**

Subject with Code: SOFTWARE ENGINEERING & TESTING (17IT607)
Course & Branch: B.Tech III Year II Sem. Regulation:R16

QUESTION BANK FOR UNIT-1

1. A. Explain in detail the Capability Maturity Model Integration (CMMI). [5M]
B. Describe various characteristics of software. [5M]
2. A. Explain the improvements observed by you in legacy software. [5M]
B. What is meant by layered technology? Explain briefly. [5M]
3. A. Write short notes on process models. [5M]
B. Explain with a neat diagram Boehm's Waterfall Model. [5M]
4. Answer the following process models:
A. Incremental Process Model [5M]
B. The RAD Model [5M]
5. A. Write short notes on Evolutionary Process Model.
B. Describe with a neat sketch Prototyping and Spiral models. [5M]
6. Explain with a diagram the Unified Process. [10M]
7. Discuss about specialized process models and their characteristics. [10M]
8. Explain briefly concurrent development model with a neat diagram. [10M]
9. Describe briefly the seven broad categories of the changing nature of software. [10M]
10. Explain briefly the evolving role of software. [10M]



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QUESTION BANK FOR UNIT-2

1. What is meant by software engineering practice? Explain briefly various software engineering practices. [10M]
2. Define deployment. Explain various requirements engineering tasks. [10M]
3. Answer the following:
 - A. Inception & Elicitation [5M]
 - B. Elaboration & Validation [5M]
4. Explain briefly the requirement engineering tasks negotiation and specification. [10M]
5. State and explain eliciting requirements. [10M]
6. Describe the concept of developing use-cases with SafeHome Control Panel. [10M]
7. Explain the analysis model with an example using activity, class and UML state diagram notations. [10M]
8. Answer the following:
 - A. Analysis Pattern [5M]
 - B. Negotiating Requirements [5M]
9. Answer the following:
 - A. Validating Requirements [5M]
 - B. Elicitation work products [5M]
10. Explain briefly various elements of analysis model. [10M]



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QUESTION BANK FOR UNIT-3

1. What is analysis modeling? Explain briefly requirements analysis. [10M]
2. State and explain Golden Rules of User Interface. How these rules affect on User Interface analysis and design? [10M]
3. Explain briefly analysis modeling approach with a neat diagram. [10M]
4. What is data modeling? Explain briefly data modeling concepts. [10M]
5. Answer the following:
 - A. Object-Oriented Analysis [5M]
 - B. Scenario-based Modeling [5M]
6. Explain with a diagram the flow-oriented modeling and how a data flow model can be designed. [10M]
7. Answer the following:
 - A. Class-based modeling [5M]
 - B. Data-flow model [5M]
8. Define design engineering. What are the different design concepts that you know in design engineering. [10M]
9. Answer the following:
 - A. Pattern-based software design [5M]
 - B. Architectural design [5M]
10. Answer the following:
 - A. Modularity [5M]
 - B. Information Hiding [5M]



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QUESTION BANK FOR UNIT-4

1. What is testing? Explain briefly the purpose of testing and the phases of testing. [10M]
2. Explain some dichotomies of software testing. [10M]
3. Discuss in detail the taxonomy of bugs. [10M]
4. Answer the following:
 - a. Consequences of Bugs [5M]
 - b. Taxonomy for Bugs [5M]
5. Answer the following:
 - a. Flow graphs and Path Testing [5M]
 - b. Basic concepts of Path Testing [5M]
6. Explain briefly about predicates, path predicates, and achievable paths. [10M]
7. Answer the following:
 - a. Multi-way branches [5M]
 - b. Path sensitizing [5M]
8. What is path instrumentation? Explain with a neat diagram. [10M]
9. What is path testing? Explain applications of path testing. [10M]
10. Explain briefly control flow graphs with their elements. Discuss decisions and case statements. [10M]



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QUESTION BANK FOR UNIT-5

1. Explain briefly transaction flow testing. What are the steps involved in transaction-flow testing? [10M]
2. Discuss various techniques involved in transaction-flow testing. What are the methods of sensitizing? [10M]
3. Define data flow. Explain briefly the basics of data-flow testing. [10M]
4. Explain various strategies involved in data-flow testing. [10M]
5. Define domain testing. Explain with a neat diagram domains and paths. [10M]
6. Discuss nice domains and ugly domains. [10M]
7. Answer the following:
 - a. Domain Bugs [5M]
 - b. Bug Assumptions [5M]
8. What do you understand domains and interface testing technique in software testing methodologies? [10M]
9. Draw and explain two-dimensional domain bugs. [10M]
10. What is domain bug? How the domain bugs will be tested? [10M]