



**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
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**QUESTION BANK (DESCRIPTIVE)**

**Subject with Code :** Software Engineering (18MC9114)

**Course & Branch:** MCA

**Year & Sem:** II-MCA & I-Sem

**Regulation:** R18

**Unit 1**

1. a) Describe the nature of Software. [6M]  
b) Describe the Layered Technology of software engineering. [6M]
2. a) Explain the levels in CMMI Model. [6M]  
b) Explain the Essence & Principles of Software Engineering. [6M]
3. a) Describe Software Myths in detail. [6M]  
b) What is Process Patterns and explain them? [6M]
4. a) Explain the importance of evolutionary process models [6M]  
b) What is CMMI and its advantages? [6M]
5. a) What are the customer myths and describe them? [6M]  
b) Explain Water fall model in detail. [6M]
6. a) What is Prescriptive Process Model and explain it clearly? [6M]  
b) Explain RAD Model. [6M]
7. a) Describe Incremental Process model. [6M]  
b) Explain spiral model with suitable example. [6M]
8. a) Explain Evolutionary process model. [6M]  
b) What is Agile development and explain them? [6M]
9. a) Explain Unified Process Model. [6M]  
b) Describe the aspect oriented software development. [6M]
10. a) Explain Agile process with suitable example. [6M]  
b) What is Extreme programming? [6M]

**Unit 2**

1. a) Explain functional and non-functional requirements. [7M]  
b) Describe the importance of requirement modeling. [5M]

2. a) Explain requirements engineering activities. [6M]  
b) Describe the importance of SRS? [6M]
3. a) What is eliciting requirements in software engineering? [6M]  
b) What is the procedure for SRS document process? [6M]
4. a) List the steps of project estimation? [6M]  
b) Explain empirical estimation models. [6M]
5. What are the steps required to establish the groundwork for understanding of software requirements? [12M]
6. a) What is eliciting requirements? Explain. [6M]  
b) Explain the steps in developing uses cases. [6M]
7. a) Explain requirements modeling process. [6M]  
b) Explain ground work analysis [6M]
8. a) Explain Web App based modeling [6M]  
b) What is class based modeling? [6M]
9. Explain the steps in the developing use cases. [12M]
10. a) Explain the process of requirements validation [6M]  
b) What are the elements of requirements of modeling? [6M]

### Unit 3

1. What are the software quality guidelines and attributes used in software design? [12M]
2. a) List out the golden rules for interface design? [6M]  
b) Explain all the design issues. [6M]
3. a) Write a short notes on interface design steps? [6M]  
b) Explain the process in user interface design? [6M]
4. a) How can analysis and principles of interface design? [6M]  
b) Explain pattern based design. [6M]
5. a) Give brief taxonomy of Architectural styles [6M]  
b) Explain architectural patterns. [6M]
6. a) Explain software design strategies and complexity [6M]  
b) Explain the importance of user interface design patterns. [6M]
7. a) Explain the interface design patterns. [6M]  
b) Describe the principles of component level design patterns. [6M]
8. a) Discuss about architectural patterns with suitable examples? [6M]  
b) What are the software design concepts? [6M]

9. a) Briefly explain golden rules user interface design? [6M]  
b) Explain the method of class based designing? [6M]
10. a) Explain the advantages of design patterns. [6M]  
B Explain Object oriented design concepts [6M]

#### Unit 4

1. What are the software quality guidelines and attributes? [12M]
2. Briefly describe software testing strategies? [12M]
3. a) Explain unit testing with examples? [6M]  
b) Describe object oriented software testing methods? [6M]
- 4 a) Explain integration testing with examples. [6M]  
b) What is validation testing? [6M]
5. a) Explain the importance and principles of testing. [6M]  
b) Compare unit testing and integration testing. [6M]
5. a) What is system testing and explain it clearly? [6M]  
b) Explain the importance of debugging. [6M]
6. Compare black box testing and white box testing? [12M]
7. a) Briefly explain basis path testing? [6M]  
b) Explain conditional testing. [6M]
8. a) Explain loop testing and its advantages. [6M]  
b) Explain the importance of Black box testing. [6M]
9. What are the black box testing methods? Explain. [12M]
10. a) Describe the boundary value analysis [6M]  
b) Discuss about basis path testing methods? [6M]

#### UNIT V

1. a) List out the umbrella activities? [6M]  
b) Explain software quality assurance. [6M]
2. a) Write a short notes on software configuration management? [6M]  
b) Explain the process measurement and metrics? [6M]
3. a) How can analysis the size oriented metrics? [6M]  
b) Explain function oriented metrics. [6M]
4. a) Describe the metrics for software quality? [6M]  
b) Explain product metrics and its importance. [6M]

5. a) Explain metrics for requirements model? [6M]  
b) Explain the metrics for the design model. [6M]
6. a) Explain the metrics for source code. [6M]  
b) Describe the metrics for testing. [6M]
7. a) Discuss about the maintenance for metrics? [6M]  
b) Explain the importance of software reengineering? [6M]
8. a) Briefly explain activities in software reengineering ? [6M]  
b) What are the software reengineering activities? [6M]
9. a) Describe the importance of software quality assurance. [6M]  
b) Briefly describe the umbrella activities? [6M]
10. a) Explain the importance of software configuration management. [6M]  
b) List out the importance of measurements and metrics? [6M]

*Prepared by Mr. P. BALAJI, Assoc. Professor, Department of MCA*