SIDDHARTH GROUP OF INSTITUTIONS :: PUTTUR
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QUESTION BANK (DESCRIPTIVE)

Subject with Code : SE&A(16CS518) **Course & Branch**: B.Tech - CSE

Year & Sem: III B.Tech & I Sem **Regulation:** R16

Essay Answer (12 mark) Questions

UNIT –I

1. Write in detail about any two specialized software process models [12 M]
2. Write notes on the following terms
   a) Legacy Software [3 M]
   b) Bath-Tub Curve [3 M]
   c) Engineering/Scientific Software [3 M]
   d) Umbrella Activities [3 M]
3. Explain in detail about water fall model and Problems encountered in it. [12 M]
4. What is CMMI and explain about CMMI models in details [12 M]
5. a) Explain the term Software Engineering – A Layered Technology [6 M]
   b) Explain about PSP & TSP framework activities. [6 M]
6. Explain in brief about Unified Process Model with neat diagram [12 M]
7. Explain in detail about Process Assessment and different approaches in it [12 M]
8. Explain how Framework activities helps to solve a problem using umbrella Activities [12 M]
9. Explain how the nature of the software changes along with the process [12 M]
10. Depict how RAD model and spiral model helps in solving a design issue [12 M]

UNIT –II

1. Define Requirement Engineering and explain about Requirements Engineering Tasks [12 M]
2. a) List out the seven core principles of Software Engineering. [6 M]
   b) What is SE practice and explain the essence or nature of SE Practice [6 M]
3. a) Explain in detail about Communication Principles/Practices [6 M]
   b) Explain in detail about Planning Principles/Practices [6 M]
4. Explain in detail about Analysis Model building and Elements of Analysis Model [12 M]
5. a) Explain the procedure to initiate the RE process [6 M]
   b) Explain about Elicitation Techniques in detail [6 M]
6. a) Write a short note on QFD [6 M]
   b) What is Requirement Elicitation and how it is done. [6 M]
7. What is Use-case? Why it is used? How it helps in analyzing the requirements? Explain with an example [12 M]
8. a) Explain in detail about Modeling(Analysis) Principles/Practices [6 M]
   b) Explain in detail about Modeling (Design) Principles/Practices [6 M]
9. Explain in detail about Construction (before/while & after coding) Principles/Practices [12 M]
10. a) Explain about Requirement Analysis Models [6 M]
    b) What is Requirement Negotiating and how it is done. Explain the process [6 M]

UNIT –III

1. Write notes on the following terms
   a) Data Objects [3 M]
   b) Data Attributes [3 M]
   c) Relationships [3 M]
   d) Analysis Rules of Thumb [3 M]
2. Explain the concepts of Object Oriented Analysis in detail [12M]
3. a) How to create Data Flow Model and draw the notations in flow modeling [6 M]
   b) What is DFD? Explain with an example diagram. [6 M]
4. What is activity diagram? Draw the activity diagram for ATM system [12M]
5. a) What is class diagram? Draw the class diagram for ATM system [8 M]
   b) What is the use of CRC diagram? [4 M]
6. a) Explain about C-Spec & P-Spec and how it helps in solving design issues [6 M]
   b) What is Architectural Design and why it is important in building a software [6 M]
7. State and Explain the Golden Rules in UID [12M]
8. Explain in detail about Design Concepts [12M]
9. a) Write the guidelines for quality design [6 M]
   b) Write about quality attributes [6 M]
10. a) What is use case diagram and write the steps in creating it [6 M]
    b) Draw the use case diagram for ATM system [6 M]

UNIT –IV

1. Write about the metrics for Process, Project and Product with an example and the Functional Point(FP) for a software product [12M]
2. Explain in detail White box testing. [12M]
3. a) What is Software Testing and why it is done? [6 M]
   b) Explain about the levels of Testing in detail [6 M]
4. What is Software Cost Estimation? Explain with COCOMA model [12M]
5. a) Write about Unit testing in detail. [6 M]
   b) Write in detail about Integration testing. [6 M]
6. a) What is the difference between Verification and Validation? Distinguish it. [6 M]
   b) Explain about Art of debugging. [6 M]
7. Explain about Testing Strategies for Object Oriented software. [12M]
8. Explain in detail about Risk Management with diagram. [12M]
9. Explain in detail about System Testing with types in it and how it is done. [12M]
10. Explain in detail about Black box testing [12M]

UNIT –V

1. a) What is Software Architecture and why it is required in building a software [6M]
   b) What are the attributes of quality software [6M]
2. Explain in detail about Architectural Styles [12M]
3. Explain in detail about the Repositories in Heterogeneous Architectures [12M]
4. a) Explain how Database Integration works [6M]
   b) Explain how Integration in Software Development Environments functions [6M]
5. Depict the working principle of shared information systems [12M]
6. Explain about Architectural Structures for Shared Information Systems [12M]
7. How Heterogeneous Architectures helps in solving the problems quick which designing[12M]
8. a) What is Event-Based Implicit Invocation [6M]
   b) What is Layered Systems in architectural design [6M]
9. Explain about Interpreters & Process Control architectures [12M]
10. a) Explain about Data Abstraction [6M]
    b) Explain about Object-Oriented Organization [6M]