

Question Bank

CO1: Understand various software engineering principles and their application

Short/Long Questions:

1. Explain the importance of software engineering in real-life projects.
2. Discuss different software development life cycle models with diagrams.
3. Write a short note on Software Process Models and their comparison.
4. Explain the advantages and disadvantages of the Waterfall Model.
5. What is the Spiral Model? Where is it best suited?

MCQs:

- Which model is best suited for large, high-risk projects?
- What does SRS stand for?

CO2: Demonstrate use of various Agile methodologies for software development

Short/Long Questions:

1. What is Agile Software Development? List its core values and principles.
2. Explain Extreme Programming (XP) with its key features.
3. What is Scrum? Explain its high-level process.
4. Describe Test-First Development with an example.
5. Differentiate between traditional SDLC and Agile.

MCQs:

- Which of the following is not a principle of XP?
- Agile development focuses on which of the following? (a) Documentation (b) Code Quality (c) Contracts (d) Rigid planning

CO3: Apply various modelling techniques for designing system requirements

Short/Long Questions:

1. What is UML? Explain different types of UML diagrams.
2. Draw and explain a Use Case Diagram for a Library Management System.
3. Explain Class Diagram with notations and example.

4. Differentiate between Structural and Behavioral UML diagrams.
5. Explain the concept of State Transition Diagram with an example.

MCQs:

- Which of these is a structural UML diagram?
- Use case diagrams are mainly used for?

CO4: Identify different types of risk and evaluate its impact on software system

Short/Long Questions:

1. What is software risk? Explain different types of software risks.
2. How do you perform risk analysis during software development?
3. What are the strategies to manage risk in a software project?
4. Explain the relationship between risk and software quality.
5. Describe risk mitigation, monitoring, and management (RMMM) plan.

MCQs:

- Which of the following is a technical risk?
- Risk management is performed during which phase of SDLC?

CO5: Distinguish different testing strategies and create test cases

Short/Long Questions:

1. Explain Black Box Testing with strategies like BVA and EP.
2. Explain White Box Testing with coverage criteria.
3. Differentiate between Alpha and Beta Testing.
4. Explain Regression Testing with an example.
5. Create test cases for a login page using equivalence class partitioning.

MCQs:

- Which testing method does not require code knowledge?
- What is the goal of system testing?

CO6: Able to understand and apply the basic project management practices in real-life projects

Short/Long Questions:

1. Explain the phases of the Unified Software Development Process.
2. What is software reengineering? When is it required?



3. Discuss the role of version control in project management.
4. Explain the significance of refactoring and when not to refactor.
5. What is software evolution? How do you manage legacy systems?

MCQs:

- Which of the following tools is used for version control?
- The cost of refactoring includes which of the following?