

SEN Unique Questions

Unit 1: Software Processes and Models

- Explain Software Process Umbrella Activities.
 - Discuss limitations of Waterfall model & Spiral Model.
 - What is Agile Process? Explain SCRUM Process Model with all activities.
 - Describe the characteristics and nature of software.
 - Explain the layered structure of software Engineering.
 - Explain Prototyping concept required in Spiral software Process Model.
 - Explain what is a V-Model?
 - Discuss any one type of Incremental process models.
 - Explain the Principles of Agile methodology.
 - Discuss the difference between Agile and Evolutionary Process Model.
 - What are major challenges in software engineering?
 - Explain Evolutionary process model.
 - Explain the Requirements model.
 - Compare Scrum and Kanban.
 - Explain the Spiral model of software development.
 - Explain the Scenario based model.
 - Explain 3 P's in software project spectrum.
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Unit 2: Requirements Engineering & Analysis

- Draw Use Case Diagram for Hospital Management System.
- What is SRS? Prepare a SRS for Online Movie Booking System.
- Explain Mc Calls Quality factors.
- Explain characteristics of SRS? Build an SRS Document for online student feedback system.
- What is Feasibility Study? Discuss the different types of feasibility study.
- Write about the Non Functional Requirements for “Online Pizza Ordering system”.

- Draw UML Use Case diagram and Class Diagram for “Smart Agriculture Monitoring System”.
 - Explain the general format of SRS for Hospital Management system.
 - Discuss the different level of DFD.
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Unit 3: Software Project Management & Estimation

- List different metrics used for software measurement? Explain function point-based estimation technique in detail.
 - Explain about Object based Estimation Technique.
 - Explain Earned value Analysis? Find project EAC, ETC, where AC is 15000, BAC is 22000, EV IS 13000, CPI is 0.8.
 - Explain about COCOMO II Model with example.
 - Explain about Project scheduling and any one tracking Technique with example.
 - Explain LOC and Function Point estimation technique in detail.
 - Explain COCOMO Model with example.
 - Explain Function Point Cost Estimation Technique with example.
 - Explain the LOC.
 - Explain the FP Estimation techniques in details.
 - Explain the tracking and scheduling.
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Unit 4: Software Design & Architecture

- Design User Interface for Online Shopping System.
- What do you mean by Cohesion & Coupling? Explain different types of cohesion & Coupling.
- Explain software design principles in detail illustrating with example.
- Explain the Golden rules of User-interface design.
- Explain The Design Model.
- Draw deployment diagram, swim lane diagram for Online shopping.
- Explain about refactoring, cohesion and coupling also benefits of high cohesion and low coupling.

- Discuss about the principles of user interface design steps.
 - Draw UML Component Diagram and Deployment Diagram for “College Management System”.
 - Discuss the various types of design patterns.
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Unit 5: Risk Management & Configuration Management

- Define Risk? What are different categories of risks? Explain RMMM plan with suitable example.
 - Explain & compare FTR & Walkthrough.
 - Explain change control & Version Control.
 - Explain change control process in SCM in detail.
 - Explain the steps involved in SQA Plan.
 - Explain Risk Mitigation, Monitoring, and Management (RMMM) plan.
 - What is a risk? Explain different types of risk in details.
 - Formal Technical Review (FTR) in details.
 - Explain in detail the Software configuration Management Process and benefits of SCM.
 - Explain steps in version and change control.
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Unit 6: Software Testing, Maintenance & Reengineering

- Explain software reengineering.
- What is Software Testing? Explain different types of software testing.
- Explain different types of software maintenance.
- Discuss about Software Reengineering and Reverse Engineering.
- Explain software testing strategy and its techniques.
- What is the difference between bug, error and defect explain with example.
- Why is cyclometric complexity important to testers? [Calculation questions...]
- Different between Alpha and beta testing.

- Explain the different techniques in white box testing.