SEN Semester Questions

SEN DEC 2023

Q1. Solve any Four (5 marks each).
a. Explain Software Process Umbrella Activities.
b. Explain software reengineering.
c. What is Capability Maturity Model (CMM)? Explain different CMM levels.
d. Design User Interface for Online Shopping System.
e. Discuss limitations of Waterfall model & Spiral Model.
f. Draw Use Case Diagram for Hospital Management System.

Q2.
a. What is Agile Process? Explain SCRUM Process Model with all activities.
b. What do you mean by Cohesion & Coupling? Explain different types of cohesion & Coupling.

Q3.
a. What is Software Testing? Explain different types of software testing.
b. Define Risk? What are different categories of risks? Explain RMMM plan with suitable example.

Q4.
a. Explain & compare FTR & Walkthrough.
b. Explain change control & Version Control.

Q5.
a. Explain different types of software maintenance.
b. What is SRS? Prepare a SRS for Online Movie Booking System.

Q6.
a. List different metrics used for software measurement? Explain function point-based estimation technique in detail.
b. Explain software design principles in detail illustrating with example.

SEN DEC 2024

Q1. Solve any Four (5 marks each).
a. Describe the characteristics, nature of software and explain the layered structure of software Engineering.
b. Explain Prototyping concept required in Spiral software Process Model.
c. Explain about Object based Estimation Technique.
d. Explain the Golden rules of User-interface design.
e. Discuss about Software Reengineering and Reverse Engineering.
f. Explain Mc Calls Quality factors.

Q2.
a. Explain Scrum Agile Development Model and Scrum Process in Detail.
b. Explain what is a V-Model? And discuss any one type of Incremental process models.

Q3.
a. Explain The Design Model, and draw deployment diagram, swim lane diagram for Online shopping.
b. Explain about refactoring, cohesion and coupling also benefits of high cohesion and low coupling.

Q4.
a. Explain Earned value Analysis? Find project EAC, ETC, where AC is 15000, BAC is 22000, EV IS 13000, CPI is 0.8.
b. Explain about COCOMO II Model with example.

Q5.
a. Explain about Project scheduling and any one tracking Technique with example.
b. Explain change control process in SCM in detail.

Q6.
a. Explain what is a risk? Different types of risk? And describe RMMM in detail.
b. Explain the principles of software testing? Discuss the in detail difference between black box and white box testing technique.

SEN MAY 2023

Q1. Solve any Four.
a. Explain the characteristics and nature of software.
b. Describe the advantages and limitations for large sized software projects.
c. Explain the steps involved in SQA Plan.
d. Discuss about the principles of user interface design steps.
e. Explain 3 P’s in software project spectrum.
f. Short note on Mc-Calls Quality factors.

Q2.
a. Explain the Principles of Agile methodology? Discuss the difference between Agile and Evolutionary Process Model.
b. Explain V-Model in details.

Q3.
a. Explain characteristics of SRS? Build an SRS Document for online student feedback system.
b. What is Feasibility Study? Discuss the different types of feasibility study.

Q4.
a. Explain LOC and Function Point estimation technique in detail.
b. Explain different types of coupling and cohesion.

Q5.
a. Explain Risk Mitigation, Monitoring, and Management (RMMM) plan.
b. Explain change control process in SCM in detail.

Q6.
a. What is a risk? Explain different types of risk in details.
b. Explain software testing strategy and its techniques.

SEN MAY 2024

Q1. Solve any Four.

a. What are major challenges in software engineering.

b. What is a Feasibility Study.

c. Write about the Non Functional Requirements for “Online Pizza Ordering system”. It should contains following:

1. Performance
2. Availability
3. Reliability
4. Security
5. Maintainability

d. Explain Evolutionary process model.

e. What is the difference between bug, error and defect explain with example.

f. Discuss Mc-Calls Quality factors.

Q2.

a. Draw UML Use Case diagram and Class Diagram for “Smart Agriculture Monitoring System”.

b. Explain COCOMO Model with example.

Q3.

a. Explain Function Point Cost Estimation Technique with example.

b. Draw UML Component Diagram and Deployment Diagram for “College Management System”.

Q4.

a. Formal Technical Review (FTR) in details.

b. Discuss the various types of design patterns.

Q5.

a. Explain in detail the Software configuration Management Process and benefits of SCM.

b. Explain Reengineering in details.

Q6.

a. Explain what is a risk? Different types of risk? and describe RMMM in detail.

b. Why is cyclomatic complexity important to testers? A Given flow graph F with entry node (1) and exit node (11) is shown below. Calculate the following:.

1. How many predicate nodes are there and what are their names?.
2. How many regions are there in flow graph F?.

3. What is the cyclomatic complexity of flowgraph F?.
4. How many nodes are there in the longest independent path?.
5. How many nodes are there in flow graph F?

SEN MAY 2025

Q1. Solve any Four (5 marks each).
a. Compare FTR and Walkthrough.
b. Explain the Requirements model.
c. Explain the LOC.
d. Different between Alpha and beta testing.
e. Compare Scrum and Kanban.

Q2.
a. Explain Risk and its types? Explain the RMMM plan.
b. Explain the different techniques in white box testing.

Q3.
a. Explain steps in version and change control.
b. Explain the FP Estimation techniques in details.

Q4.
a. Explain cohesion and Coupling. Explain different types with detailed example.
b. Explain the Spiral model of software development.

Q5.
a. Explain the general format of SRS for Hospital Management system.
b. Explain software Re-engineering in detail.

Q6. Solve any Four.
a. Explain the CMM model.
b. What are the different types of maintenance.
c. Explain the Scenario based model.

d. Explain the tracking and scheduling.

e. Discuss the different level of DFD.