

2007 VISVESVARAYA TECHNOLOGICAL UNIVERSITY

B.E INFORMATION TECHNOLOGY SOFTWARE ENGINEERING

- 1 a. Explain key challenges facing software engineering.
 - b. What is process iteration? Describe the hybrid models of software development.
 - c. Describe the general model of design process.
- 2 a. Explain the structure of software requirements document.
 - b. Why elicitation and analysis is a difficult process? Explain giving reasons.
 - c. What are the different types of checks that should be carried out on requirements in requirements document?
- 3 a. What are the benefits of developing a system prototype? Explain.
 - b. Describe a software process with throw away prototyping. What are the problems with this approach?
 - c. What is a CASE workbench? Describe the tools included in an invoice processing workbench.
- 4 a. What is modular decomposition? Explain dataflow model of an invoice processing system.
 - b. Draw and explain sequence diagram and state diagram for a typical weather station.
 - c. What are the guidelines that should be followed while using colour in a user interface?
- 5 a. Describe the general inspection process. Also discuss possible inspection checks.
 - b. Describe the metrics for specifying software reliability and availability.
 - c. What is integration testing? Compare top down and bottom up testing.
- 6 a. Explain the COCOMO2 costing model.
 - b. Describe the project planning process, give pseudocode.
 - c. Describe the factors affecting software engineering productivity.
- 7 a. Which is the widely used method of validating the quality of process or product? Explain.
 - b. Describe the static product metrics for assessing the quality attributes.
 - c. Why assessment of legacy systems is required? Describe the strategies used for evolving these systems.
- 8 Write short notes on:
 - a. Path testing
 - b. Context models
 - c. Activity network
 - d. Safety life cycle