

R 8209

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2006.

Sixth Semester

Computer Science and Engineering

CS 338 — SOFTWARE ENGINEERING

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the advantages of prototype model?
2. List atleast four dependency – related risk factors.
3. What is meant by Cohesion? How should a software be designed considering cohesion?
4. What does data flow diagram level 0 represent?
5. What is meant by software quality assurance?
6. List down few process and product metrics.
7. What is the objective of unit testing?
8. What are the types of software maintenance?
9. What is the advantage of CASE tool?
10. List out the four broad categories of configuration management Activities.

PART B — (5 × 16 = 80 marks)

11. (a) (i) What do software versions mean and explain version control? (4)
(ii) What are the characteristics of CASE tools? What are the tasks to be automated for CASE approach? Why do case tools not normally control software crisis? (12)

Or

- (b) (i) What is software configuration management? Why software configuration management? Discuss. (12)
- (ii) Discuss the major differences between a software life cycle model and a process model. (4)
12. (a) (i) Compare waterfall model and spiral model of software development. Give the advantages and disadvantages of each. (8)
- (ii) Discuss waterfall model with its diagrammatic representation. (8)

Or

- (b) What are the requirement issues and management issues with reference to software risk management? Also list some of the critical areas of risk?
13. (a) What are the requirements of a software design? State how to transform an informal design to a detailed design. What are the types of module cohesion?

Or

- (b) What is meant by design for reuse? How it differs from Re-Engineering? Give the steps of reuse model widely used. Can a system ever be completely decoupled? Justify.
14. (a) What are software metrics? Discuss them in detail. Discuss the attributes of effective software metrics. (10 + 6)

Or

- (b) (i) Some experimental evidence suggests that the initial size estimate for a project affects the nature and results of the project. Consider two different managers charged with developing the same application one estimates that the size of the application will be 50,000 lines while the other estimates that will be 1,00,000 lines. Discuss how these estimates affect the project throughout its life cycle. (6)
- (ii) Define how to document software design and development phases. (5)
- (iii) Discuss on programming standards. (5)

15. (a) (i) What are the different structural testing methods? Explain. (10)
(ii) What is need for software maintenance and maintenance report? (6)

Or

- (b) (i) Discuss the importance of testing phase and brief out various testing strategies. (10)
(ii) Differentiate static testing and dynamic testing done. State few salient characteristics of modern testing tools. (6)
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