Z 3513

M.C.A. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2006.

Third Semester

MC 1703 : SOFTWARE ENGINEERING

(Regulation 2005)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Compare programs with software products.

2. List out the major changes in software development practices.

3. Which phase of SLC in waterfall model consumes the maximum effort for developing a typical software product?

4. What comprises software project planning?

5. What do you mean from 'Program Volume'?

6. What is critical path, in scheduling?

7. Name the two major techniques for representing complex logic, in SRS.

8. What are the characteristics of a good software design and good user interface?

9. What is mutation testing?

10. What are reliability metrics? Name the list.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the activities in various phases of SLC in iterative waterfall model approach. (10)

(ii) Why is LOC metric not considered as an estimate for project size? (6)

Or

(b) (i) Review on empirical cost estimation techniques and heuristic estimation technique. (10)

(ii) How software risks are assessed and explain strategies for their containment. (6)

12. (a) (i) Who are all the users of SRS and discuss the contents of SRS. (8)

(ii) Explain briefly the algebraic specification in requirement analysis and specification. (8)

Or

(b) (i) What is an use case model? Explain. (6)

(ii) What are interaction and collaboration diagrams? Illustrate with relevant examples. (5 + 5)

13. (a) (i) What do you mean by the terms cohesion and coupling in the context of software design? Enumerate different types of cohesion and coupling. (10)

(ii) Explain various types of user interfaces. (6)

Or

(b) (i) Describe DFD and structured design. (10)

(ii) What do you mean by "data dictionary" in the context of structured analysis? How is the data dictionary useful in different phases of the life cycle of a software product? (6)

14. (a) Describe black box and white box software testing methods. (8 + 8)

Or

(b) Explain integration testing and debugging guidelines. (8 + 8)

15. (a) (i) Describe the issues in software reliability. (8)

(ii) What is SCM? Explain the features. (8)

Or

(b) (i) Explain on ISO 9000 certification of software organization. (8)

(ii) Write briefly on software quality assurance plan. (8)
