Reg. No. : | | | | | | | | | | | |

W 6125

M.E. DEGREE EXAMINATION, JANUARY 2008.

First Semester

Computer Science and Engineering

CS 1604 — SOFTWARE ENGINEERING METHODOLOGIES

(Regulation 2005)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the prime objectives of software engineering?

2. Give the difference between "Known risk" and "predictable risk".

3. How software requirement specification review is conducted?

4. What is modeling activity?

5. What is the outcome of a design process?

6. Why architectural design is necessary?

7. State the attributes of good test.

8. What is system testing?

9. What is the need for software quality assurance activity?

10. Briefly discuss about the advantages of CASE tools.

PART B — (5 × 16 = 80 marks)

11. (a) Discuss iterative waterfall model and spiral model for software life cycle and discuss its advantages and disadvantages with neat diagram. (16)

Or

(b) Propose a specific software project that would be appropriate for linear life cycle model. Discuss elaborately how it is applied to the software development. (16)

12. (a) (i) Compare system engineering and requirements engineering in detail. (8)

(ii) Write a detailed note on any two requirement elicitation methods with suitable illustration. (8)

Or

(b) Explain how the structure of analysis model maps to design model with neat sketch. (16)

13. (a) (i) Explain the various design principles and guidelines with an illustration. (8)

(ii) Discuss in detail about pattern oriented design approach with an example. (8)

Or

(b) (i) Discuss in detail various guidelines with respect to real-time system design. (8)

(ii) Compare object-oriented method and conventional method for designing components with an example. (8)

14. (a) (i) Compare black box and white box testing. (6)

(ii) Explain the different strategies of integration testing. (10)

Or

(b) What is cyclomatic complexity? Explain how it is useful in deriving the logical complexity of a program with an example. (16)

15. (a) Write short notes on :

(i) Software reliability (4)

(ii) Software technical reviews (4)

(iii) Software re-engineering (4)

(iv) Software maintenance. (4)

Or

(b) With suitable examples describe the various software configuration management tasks in detail. (16)
