L 1060

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Fourth Semester

Information Technology

CS 1353 — SOFTWARE ENGINEERING

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write any two characteristics of software as a product.

2. List the process maturity levels in SEI's CMM.

3. Write the distinct steps in requirement engineering process.

4. Compare evolutionary prototyping and throw away prototyping.

5. What are the various models produced by the software design process?

6. What are the quality parameters considered for effective modular design?

7. Define cyclomatic complexity.

8. Write short notes on equivalence partitioning.

9. Write the types of system tests.

10. List any FOUR categories of CASE tools.

PART B — (5 × 16 = 80 marks)

11. (i) Which is more important – the product or process? Justify your answer.
    (4)

    (ii) Identify the umbrella activities in software engineering process. (4)

    (iii) With suitable illustration explain about SPIRAL model evolutionary software development.
    (8)

12. (a) (i) Compare functional and behavioral models. (4)

(ii) With a suitable diagram explain the elements of the analysis model. (8)

(iii) With an example explain about DFD. (4)

Or

(b) (i) Explain the extensions of DFD for real time systems. (8)

(ii) Discuss the features of State Transition Diagram and its application. (8)

13. (a) What is transform mapping? Explain the process with an illustration. What is its strength and weakness? (16)

Or

(b) (i) Explain about the various design concepts considered during design. (12)

(ii) Write short notes on user interface design process. (4)

14. (a) Explain about black box testing methods and its advantages and drawbacks. (16)

Or

(b) Write short notes on : (8 + 8)

(i) Data flow testing.

(ii) Integration testing.

15. (a) (i) What is Halstead's software science metric. Define. (4)

(ii) Explain about function point metric, in detail. (12)

Or

(b) Write short notes on :

(i) Software maintenance. (8)

(ii) Task scheduling with an example. (8)

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