E 8225

M.C.A. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2005.

Second Semester

CA 143 — SOFTWARE ENGINEERING

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. What is the difference between Incremental Delivery and Evolutionary delivery?

3. What is known as software requirements specification review? How is it conducted?

4. What is an indirect measure and why are such measures common in software metrics work?

5. List out the names of all software tools used for the different stages of a software development.

6. What is the 40-20-40 Rule in Software Development?

7. What are the roles of cylcomatic complexity value in the software testing?

8. Differentiate verification and validation. Give an example for each.

9. List out the importance of cost estimation in software development.

10. What is known as Post Implementation Review?

PART B — (5 × 16 = 80 marks)

11. (i) Explain the spiral models of a software process with neat diagram.   (8)

    (ii) Propose a specific software project that would be amenable to the water fall model. Present a scenario for applying the model to the software.   (8)

12. (a) What is cohesion? Explain different types of cohesion and coupling with examples. (16)

Or

(b) (i) What is Data Flow Oriented Design ? What are the components of it? (6)

(ii) Draw a detailed data flow diagram for the Library Information System. (10)

13. (a) (i) Explain the various quality factors and their software quality criteria with an example. (8)

(ii) Explain constructive cost model in detail. (8)

Or

(b) Explain the function-based metrics of analysis model and component – level design metric of design model with an example. (16)

14. (a) Explain the various software testing techniques with an example. (16)

Or

(b) Explain the test case management and the various types of maintenance. (16)

15. (a) Describe the following with an example :

(i) Code review. (8)

(ii) Version control. (8)

Or

(b) Write short notes on :

(i) Software configuration management. (8)

(ii) Case repository features. (8)

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