E 8205

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

Elective

CA 035 — SOFTWARE QUALITY MANAGEMENT

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is the objective of a software process assessment?

2. Distinguish between verification and validation.

3. What are the information needed by the Change Control Process (CCP)?

4. Write down the ground rules for SCM audit.

5. List out the key responsibilities of standards maintenance.

6. What is the role of reviewers as a inspection participant?

7. "Software testing is both progressive and regressive" Justify.

8. What does error seeding mean?

9. What are the principles of software defect prevention?

10. Why Defect prevention is so important?

PART B — (5 × 16 = 80 marks)

11. (i) Explain the implementation steps for a defect prevention program.   (8)

    (ii) Tabulate the hardware prevention, appraisal and failure cost.   (6)

    (iii) Write down the requirements for software process change.   (2)

12. (a) (i) Explain the steps involved in training program for assessment team. (8)

(ii) What is the use of assessment report? Explain. (8)

Or

(b) (i) List and explain the SQA functions. (8)

(ii) What is the need of SQAP? Explain the contents of SQAP preparation in IEEE standard. (8)

13. (a) With a neat sketch, explain the various configuration management functions. (16)

Or

(b) (i) Explain the implementation of change control procedure. (8)

(ii) Write note on software configuration accounting. (8)

14. (a) (i) How do we classify the organization's standards and procedure needs? Give examples. (8)

(ii) Tabulate the types of reviews with respect to the following : Objective change verification, leadership and output reports. (8)

Or

(b) (i) Explain the basic principles of inspection process. (8)

(ii) Write note on conduct of inspection. (8)

15. (a) (i) Describe the functions of software testing tools. (10)

(ii) What is test report? Explain. (6)

Or

(b) (i) Discuss the classes of quality measures. (8)

(ii) How do we make an estimate of program quality? (8)

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