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

Question Paper Code : Q 2149

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2009.

Eighth Semester

(Regulation 2004)

Computer Science and Engineering

CS 1020 — SOFTWARE QUALITY MANAGEMENT

(Common to B.E. (Part-Time) Seventh Semester Regulation 2005)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define Software Quality.

2. How will you measure the software reliability?

3. What are reviews in software projects?

4. Give the importance of software documentation.

5. What is defect? How is it different from error?

6. Explain pareto analysis briefly.

7. What is a quality circle?

8. Define complexity metric.

9. Write down the advantages of quality standards.

10. List the features of ISO 9000 series.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the Garvin's view of quality. (8)

(ii) Discuss the Gilb's approach for quality. (8)

Or

(b) (i) Explain the hierarchical model of Boehm. (8)

(ii) List the McCalls quality metrics and explain them. (8)

12. (a) (i) Explain the SQA plan. (8)

(ii) How will you form teams to maintain quality in software development and products? (8)

Or

(b) (i) List the techniques to be followed in reviews and explain them. (8)

(ii) What are quality audits? Explain it. (8)

13. (a) (i) Explain the Rayleigh model for reliability. (8)

(ii) Explain the Ishikawa's basic tools and the features provided for quality. (8)

Or

(b) Explain the techniques used for defect prevention and removal. (16)

14. (a) Explain the reliability growth models for QMS. (16)

Or

(b) (i) Explain the techniques used for customer satisfaction analysis. (8)

(ii) List the advantages of software metrics in software quality maintenance. (8)

15. (a) (i) Explain the features of ISO 9000 – 3 for software development. (8)

(ii) What is CMM? Explain its levels. (8)

Or

(b) Explain the six sigma concepts in detail. (16)