B.E./B.Tech DEGREE EXAMINATION, MAY/JUNE 2012.

Eighth Semester

Computer Science and Engineering

CS 2055/CS803 – SOFTWARE QUALITY ASSURANCE

(Regulation 2008)

Time: Three hours Maximum: 100 marks

Answer ALL questions.

PART A - (10 × 2 = 20 marks)

1. Describe about the nature of task fulfilled by the software configuration management audit.
2. Specify the various people involved in the SQA group.
3. What are the different specific problems associated with different aspects of defects in QA activities?
4. What are the overall responsibilities of the top managements for software quality?
5. What are the main objectives of software quality metrics?
6. What are the limitations of software quality metrics?
7. What are the characteristics of software quality programs?
8. What are the measurable attributes of software quality program?
9. What are the benefits of using SQA standard in quality management?
10. Write about the general principles of Capability Maturity Model.

PART B – (5 × 16 = 80 marks)

11. (a) Define the concept of software configuration version. Explain about the objective of software configuration management in details. (16)

Or

(b)(i) Discuss about the software configuration evolution model. (8)

(ii) Explain the standard structures for SQA plan (8)

12. (a)Explain the framework of the quality assurance organization structures with neat diagram. (16)

Or

(b)(i) Explain the various techniques of defect prevention. (8)

(ii) Illustrate items to be recorded in the management review report. (8)

13. (a) What is the objective of Total Quality Management? Explain briefly about the various functions TQM. (16)

Or

(b)(i) Explain how software quality metrics are catagorized. (8)

(ii)Explain why statistical analysis method is required for software quality metric results. (8)

14. (a) Explain how Software Quality Assurance Process differ from software development process ? Also explain each phases of software quality program development. (16)

Or

(b)(i) Discuss the characteristics of Capability Maturity Model Integration levels. (8)

(ii)Explain any two testing methods for software quality assurance program. (8)

15. (a)Explain the requirements needed by ISO 9000 quality system standard for a software organisation. (16)

Or

(b) Illustrate the various levels of Capability Maturity Model and Key Process Areas (KPA) with neat diagram. (16)