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**Question Paper Code : 11229**

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

Elective

Computer Science and Engineering

CS 9262/CS 962 – SOFTWARE QUALITY ASSURANCE

(Regulation 2009)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the characteristics and benefits of Software Quality Assurance?
2. Define Quality Planning.
3. List the steps involved in the generation of tests using the Category-partition method.
4. What is regression test?
5. Why is testing important in software development?
6. Write some automated testing tools.
7. Mention the types of software quality metrics.
8. Define software configuration management.
9. Why are processes needed for SQA?
10. Write the steps in SQA management.

PART B — (5 × 16 = 80 marks)

11. (a) Discuss the components of SQA system with a suitable diagram. (16)

Or

- (b) (i) What are the common types of software reviews? Explain them. (8)
- (ii) State the different principles of SQA defect prevention. (8)

12. (a) (i) How do you partition the variables into equivalence classes? Explain. (8)
- (ii) What is Finite-state Machine? Write the properties of Finite State Machine. (8)

Or

- (b) Write short notes on :
- (i) Data Flow Graph. (8)
- (ii) Mutation Operators. (8)

13. (a) (i) Distinguish between black box and white box testing. (8)
- (ii) Write a short note on the different integration testing approaches. (8)

Or

- (b) Write the principle attributes of testing tools and describe the automated software tools. (16)

14. (a) Discuss the hierarchical models of Boehm and McCall and explain the significance of these models in software development process. (16)

Or

- (b) What is configuration control? Explain configuration management process. (16)

15. (a) Discuss the needs for Quality Standards. (16)

Or

- (b) (i) Explain the costs associated with quality. (8)
- (ii) Explain the association between the management and software quality assurance. (8)