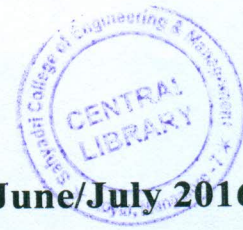


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**Sixth Semester B.E. Degree Examination, June/July 2016**  
**Software Testing**

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, selecting  
atleast TWO questions from each part.**

**PART – A**

- 1 a. What is software testing? Why it is so important in software development life cycle? (06 Marks)
- b. Define the following : i) Error ii) fault iii) failure iv) incident v) test vi) test case. (06 Marks)
- c. Explain with a neat diagram the currency converter and Saturn wind shield wiper controller. (08 Marks)
- 2 a. Justify the usage of boundary value analysis with function of two variables and highlight the limitations of BVA. (08 Marks)
- b. Briefly explain weak normal and strong robust equivalence class testing with an example. (08 Marks)
- c. Write a short note on random testing. (04 Marks)
- 3 a. What is cyclomatic complexity? Explain how to calculate cyclomatic complexity of a given program by considering the biggest of three number logic. (08 Marks)
- b. Explain slice –based testing guidelines and observations in detail. (08 Marks)
- c. Write a short note on define/use testing. (04 Marks)
- 4 a. With a neat diagram explain the waterfall life cycle and clearly show partial functional decomposition of the ATM system. (08 Marks)
- b. List and explain pros and cons of the water fall model. (04 Marks)
- c. With supporting diagrams and examples explain top-down and bottom-up integration. (08 Marks)

**PART – B**

- 5 a. Explain the basis concept for requirements specification. (12 Marks)
- b. Explain with supporting diagram the client server testing. (08 Marks)
- 6 a. Define validation. With a neat sketch explain the relation of verification and validation activities with respect to artifacts produced in a software development project. (10 Marks)
- b. Explain sensitivity and redundancy. (06 Marks)
- c. Define the terms reliability and availability. (04 Marks)
- 7 a. Distinguish between :
  - i) Competent programmer hypothesis and coupling effect hypothesis (04 Marks)
  - ii) Distinguished mutant and equivalent mutant. (08 Marks)
- b. Explain the fault–based adequacy criteria. (08 Marks)
- c. What is scaffolding? Explain briefly generic versus specific scaffolding. (08 Marks)
- 8 Write short notes on :
  - a. Clean room process. (06 Marks)
  - b. Different types of risks specific to the quality process. (06 Marks)
  - c. A standard organization of an analysis and test plan. (08 Marks)