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**Sixth Semester B.E. Degree Examination, Dec.2015/Jan.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. Why do we test software? Discuss what a typical test case information should include. (07 Marks)
- b. Differentiate between black box testing and white box testing. (05 Marks)
- c. Explain the levels of abstraction and testing in the waterfall model. (08 Marks)
- 2 a. What is boundary value analysis? Write the test cases using boundary value analysis testing for triangle problem. (07 Marks)
- b. Define equivalence class testing. Write weak robust equivalence class testing for commission problem. (06 Marks)
- c. Write the decision table for triangle problem and discuss how well decision table testing deals with multiple fault assumption. (07 Marks)
- 3 a. Explain metric based testing. (08 Marks)
- b. Using Mc-Cabe's strongly connected graph, write the path/edge traversal. (09 Marks)
- c. Draw the lattice on sales and communication. (Hint slices on sales and commission). (03 Marks)
- 4 a. Define regression and progression testing. (04 Marks)
- b. Draw the context diagram of the SATM system and explain the same. (08 Marks)
- c. Draw the PIN entry finite machine, explain with corresponding screens. (08 Marks)

**PART – B**

- 5 a. What is decomposition-based integration? Explain any one of them with an example. (07 Marks)
- b. Define thread. How do we test them? (05 Marks)
- c. Explain atomic system function testing by taking an example of next date. (06 Marks)
- d. What is interaction testing? (02 Marks)
- 6 a. Validation activities check work product against actual user requirement while verification activities check consistency of work product – justify your answer with suitable diagram and explanation. (07 Marks)
- b. Write six principles which constitute the core of software testing. (06 Marks)
- c. List the goals of quality process. (04 Marks)
- d. Can a system be correct and yet unsafe? (03 Marks)
- 7 a. Write the fault based testing terminology and assumptions. (06 Marks)
- b. What is scaffolding? What purposes it serves, explain with an example. (06 Marks)
- c. What are test oracles? Explain comparison based oracle. (05 Marks)
- d. Write about a paragraph on any one : (03 Marks)
  - i) Self-checks on oracles
  - ii) Capture and replay.
- 8 a. Based on test and analysis strategies explain any one : (07 Marks)
  - i) Clean room
  - ii) Software reliability engineered testing
  - iii) Extreme programming.
- b. Explain risk management in the quality plan. (10 Marks)
- c. What is test and analysis report. (03 Marks)

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