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10CS842

**Eighth Semester B.E. Degree Examination, Dec.2018/Jan.2019**  
**Software Testing**

Time: 3 hrs.

Max. Marks:100

**Note: Answer FIVE full questions, selecting  
at least TWO questions from each part.**

**PART – A**

- 1 a. Explain with a neat diagram testing and debugging cycle. (08 Marks)
- b. How do you measure software quality? Discuss correctness versus reliability pertaining to program. (08 Marks)
- c. What is black box testing? How is it differing from white box testing? (04 Marks)
- 2 a. Explain decision table testing and generate test cases for triangle problem using decision table. (08 Marks)
- b. Briefly explain weak normal and strong robust equivalence class testing with next date problem as an example. (08 Marks)
- c. With neat figure, explain about,
  - (i) Robustness testing
  - (ii) Worst case testing
 (04 Marks)
- 3 a. Design a program graph and DD-path graph for the commission program. (10 Marks)
- b. Explain Millers test metrics which are based on program graphs. (05 Marks)
- c. What is Slice testing? Explain about style and technique to find slice of program. (05 Marks)
- 4 a. Describe top down and bottom up integration strategies. (10 Marks)
- b. Explain the simple ATM application with the help of,
  - (i) Level 1 data flow diagram.
  - (ii) Upper level finite state machine.
 (10 Marks)

**PART – B**

- 5 a. Define the below terms:
 

(i) MM-path	(ii) Data	(iii) Actions	(iv) Ports.	(08 Marks)
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- b. What is interaction testing? Explain four basic types of interactions? (07 Marks)
- c. Write short note on client / server testing. (05 Marks)
- 6 a. Explain sensitivity and redundancy. (06 Marks)
- b. What is dependability in software quality control? Briefly discuss the dependability properties in process framework. (07 Marks)
- c. Why organizational factors are needed in process framework? (07 Marks)
- 7 a. What is fault based testing? What are the assumptions in the fault base testing? (07 Marks)
- b. What is scaffolding? Explain briefly generic versus specific scaffolding. (07 Marks)
- c. What are test oracles? Explain comparison based oracles. (06 Marks)
- 8 a. Explain clean room process, with neat diagram. (10 Marks)
- b. Explain risk management in the quality plan. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.

