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10CS842

**Eighth Semester B.E. Degree Examination, Dec.2017/Jan.2018**  
**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? Explain the process involved in SDLC. (07 Marks)  
b. Differentiate between black box testing and white box testing. (05 Marks)  
c. With a neat diagram, explain the SATM (Simple Automated Teller Machine) system. (08 Marks)
- 2 a. Explain decision tables. Construct decision table of the triangle problem, it accepts three integers a, b, and c as 3 sides inputs : Equilateral, Scalene, Isosceles or not a triangle and satisfy the following conditions:  $a < b + c$ ,  $b < a + c$  and  $c < a + b$ . (08 Marks)  
b. Explain Random testing with an example. (04 Marks)  
c. Briefly explain i) Weak Normal Equivalence class testing ii) Strong Normal Equivalence class testing iii) Weak Robust Equivalence class testing iv) Strong Robust Equivalence class testing. (08 Marks)
- 3 a. Explain Metric based testing. (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. Describe Top – down and Bottom – up Integration strategies. (06 Marks)  
b. Explain call graph based integration with the help of:  
i) Pairwise Integration ii) Neighbourhood Integration (06 Marks)  
c. Explain the decomposition based integration with an example. (04 Marks)  
d. Define Regression and Progression testing. (04 Marks)

**PART - B**

- 5 a. Define the below terms : i) Threads ii) MM – path iii) Data iv) Action v) Ports (10 Marks)  
b. Explain different types of interactions with example. (10 Marks)
- 6 a. Explain in detail, Validation and Verification and their differences. (10 Marks)  
b. Explain the dependability properties. (06 Marks)  
c. List the goals of Quality process. (04 Marks)
- 7 a. Explain fault-based testing terminologies. (06 Marks)  
b. Describe the test oracles with a neat diagram. (08 Marks)  
c. What is Scaffolding? What purposes it serves? Explain with an example. (06 Marks)
- 8 a. Explain Risk Management in the quality plan. (10 Marks)  
b. Give the standard structure of an analysis and test 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.