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10IS65

# Sixth Semester B.E. Degree Examination, June/July 2013
## 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 error and fault taxonomies. **(05 Marks)**

b. Explain in detail various levels of software testing with embedded device like STAM (Simple Automatic Teller Machine) as an example. **(15 Marks)**

2 a. Explain : i) Boundary value testing ii) Equivalence class testing iii) Decision table based testing. **(10 Marks)**

b. Explain in detail, Worest-case testing, with an example. **(10 Marks)**

3 a. Explain test coverage metrics and Basis path testing, with an example. **(10 Marks)**

b. Explain slice-based testing guide lines and observation in detail. **(10 Marks)**

4 a. Explain traditional view of testing levels, alternative life-cycle models. **(10 Marks)**

b. Explain in detail, path-based, call graph based and path based interpretation, with an example. **(10 Marks)**

### PART – B

5 a. Explain and discuss: Thread and Finding thread, Testing threads are important in software testing. **(10 Marks)**

b. Explain Taxonomy of interactions, interaction, composition and determinism. **(10 Marks)**

6 a. Explain in detail, validation and verification and their differences. **(10 Marks)**

b. Explain : i) Degrees of freedom ii) Sensitivity iii) Redundancy iv) Restriction v) Partition and explain in detail any of them. **(10 Marks)**

7 a. Explain overview of assumptions in fault-based testing. **(04 Marks)**

b. Explain in detail, Mutation analysis and variations on mutation testing. **(10 Marks)**

c. Explain the terms: oracle, scaffolding, self checks on oracles in software testing. **(06 Marks)**

8 a. Write a short note on: i) Quality ii) Process iii) Test and analysis iv) Risk planning v) Monitoring the process vi) Improving the process. **(12 Marks)**

b. Explain the features of test design specifications documents. **(03 Marks)**

c. What are processed quality and analysis strategies in a brief note? **(05 Marks)**

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