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10IS65

Sixth Semester B.E. Degree Examination, June/July 2015
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. Define Error, Fault, Failure, Incident, Test and Test case. Explain testing life cycle, with neat diagram. (10 Marks)
b. Define all the faults classified by severity. (05 Marks)
c. Explain database diagram for a structural triangle program. (05 Marks)
- 2 a. Explain the limitations of boundary value analysis and develop a formula for the number of robust worst case test cases for a function of two variables. (08 Marks)
b. Describe weak and strong normal equivalence class testing, with a neat diagram. (06 Marks)
c. Explain the basic decision table terms. (06 Marks)
- 3 a. Explain Millers test coverage metrics which are based on program graphs. (10 Marks)
b. Explain Rapps – Weyuker dataflow coverage metrics with a neat diagram. (10 Marks)
- 4 a. With a neat sketches, briefly explain different alternative life cycle models. (14 Marks)
b. Describe top down and bottom up integration strategies. (06 Marks)

PART - B

- 5 a. Explain basic concepts for requirement specification with E – R model and modeling relationships among basic constructs. (10 Marks)
b. Explain different types of interactions with example. (10 Marks)
- 6 a. Discuss : i) Verification ii) Validation. (04 Marks)
b. Explain basic principles that characterize various approaches and techniques for analysis and testing. (10 Marks)
c. Explain dependability properties. (06 Marks)
- 7 a. Briefly explain the terminologies of fault based testing and mutation analysis. (10 Marks)
b. Discuss : i) Scaffolding ii) Test oracle. (10 Marks)
- 8 a. Explain clean room process, with neat diagram. (10 Marks)
b. Give the standard structure of an analysis and test plan. (10 Marks)

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 & 50, will be treated as malpractice.