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10IS65

Sixth Semester B.E. Degree Examination, June/July 2017
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. Explain the two fundamental approaches used to identify test cases. (08 Marks)
b. Define the terms : i) error ii) fault iii) failure iv) incident v) test case. (05 Marks)
c. Write pseudo-code for commission problem. (07 Marks)
- 2 a. Explain weak robust and strong robust equivalence class testing, considering example of next date problem. (08 Marks)
b. Explain decision table and its technique to solve triangle problem. (08 Marks)
c. Write short note on worst case testing. (04 Marks)
- 3 a. Explain different test case coverage metrics. (08 Marks)
b. Explain different define/use testing definitions. (10 Marks)
c. Draw diagram for data flow coverage metrics of Rapps/Weyuker. (02 Marks)
- 4 a. Explain traditional view of testing levels and rapid prototyping life cycles. (10 Marks)
b. With an example, explain top-down integration and bottom-up integration. (06 Marks)
c. Explain the terms : i) source node ii) sink node iii) module execution path iv) MM-path. (04 Marks)

PART – B

- 5 a. Explain the basic concepts of requirements specification. (10 Marks)
b. Explain static interactions in a single processor and static interactions in multiple processors. (06 Marks)
c. Write note on client/server testing. (04 Marks)
- 6 a. Explain : i) degrees of freedom ii) sensitivity iii) redundancy iv) restriction v) partition. (10 Marks)
b. With a neat diagram, explain the validation and verification activities check work product against actual user requirements. (10 Marks)
- 7 a. Explain in detail mutation analysis and variations on mutation testing. (10 Marks)
b. Write note on : i) Test oracles ii) Capture and replay. (06 Marks)
c. What is scaffolding? Explain. (04 Marks)
- 8 a. Write note on :
i) Risk planning
ii) Improving the process
iii) Organizing documents
iv) Monitoring the process
v) Test design specification documents. (10 Marks)
b. Describe dependability properties in detail. (10 Marks)

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Instruction 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, e.g. 1+2=3, will be treated as malpractices.