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10CS842

Eighth Semester B.E. Degree Examination, June/July 2016
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. With a neat diagram of a testing life cycle explain following :
i) Fault ii) Failure iii) Incident iv) Test case **(10 Marks)**

b. With a neat sketch, explain the features of 'The SATM' system. **(10 Marks)**

2 a. Explain the following :
i) Robustness testing ii) Worst – case testing. **(08 Marks)**

b. Describe the equivalence class test cases for 'The triangle problem'. **(12 Marks)**

3 a. Define the program graph. Write a structured triangle program and the program graph. **(10 Marks)**

b. For the program graph G(P) and a set of program variable, define the terms 'Defining node of a variable', 'Definition use path with respect to a variable 'All-Defs criterion', 'All C-uses/some p-used and 'All du-paths criterion'. **(10 Marks)**

4 a. Briefly explain the specification – based life – cycle models in levels of testing. **(10 Marks)**

b. What is decomposition based integration? Define the different types of decomposition based integration. **(10 Marks)**

PART – B

5 a. Briefly explain the basic concepts for requirements specification in system testing. **(10 Marks)**

b. Write a short note on: 'taxonomy of interactions' and 'Client/ Server testing'. **(10 Marks)**

6 a. List and explain any four principles that characterize various approaches and techniques for analysis and testing. **(10 Marks)**

b. Explain how does the goals of quality process improvement can be accomplished for analysis and testing of a software. **(10 Marks)**

7 a. What is fault – based testing? Define the terminologies 'Program location' and 'Alternate expression'. **(06 Marks)**

b. Define scaffolding? Mention the purposes of scaffolding. **(04 Marks)**

c. What is a test oracle? With a neat diagram explain the comparison based test oracle. **(10 Marks)**

8 a. Discuss the risks generic to process management and risks specific to quality management with a suitable example. **(10 Marks)**

b. Discuss the basic elements of analysis and test plan. **(10 Marks)**

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