10CS842

Eighth Semester B.E. Degree Examination, June / July 2014
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 errors, faults and failures in the process of programming and testing with a flow diagram. (08 Marks)
   b. Briefly explain about functional testing and structural testing. (08 Marks)
   c. Draw the dataflow diagram for a structured triangle program implementation. (04 Marks)

2 a. With example, explain about boundary value analysis and mention its limitation. (04 Marks)
   b. With neat figure, explain about i) Robustness testing ii) Worst case testing. (06 Marks)
   c. Explain about,
      i) Strong normal equivalence class testing.
      ii) Strong Robust equivalence class testing. (04 Marks)
   d. Write equivalence class test cases for the triangle problem (06 Marks)

3 a. Write a structured triangle program draw the program graph and find the DD paths, DD path graph for the triangle program. (08 Marks)
   b. For the program graph G(P) and a set of program variable V define the following :
      i)   Defining node of variable.
      ii) Usage node of variable.
      iii) Definition use path with respect to variable.
      iv) Definition clear path with respect to variable. (04 Marks)
   c. Explain about,
      i) du-path test coverage metrices with data flow diagram.
      ii) Style and technique to find slice of program. (08 Marks)

4 a. Explain about specification - based lifecycle model. (06 Marks)
   b. Briefly explain about SATM system, draw the context diagram, ER model and decomposition tree for SATM system. (08 Marks)
   c. Explain about path-based integration. (06 Marks)

PART – B

5 a. Briefly explain about functional strategies for thread testing. (10 Marks)
   b. Explain about client / server testing. (10 Marks)

6 a. With a neat diagram, explain the relation of verification and validation activities with respect to artifact produced in software development project. (08 Marks)
   b. Explain the six principles that characterize various approaches and technique for analysis and testing. (12 Marks)

7 a. Define Scaffolding Distinguish between Generic versus specific Scaffolding briefly. (08 Marks)
   b. Explain about:
      i) Test oracles   ii) Capture and Relay   iii) Test cases   (12 Marks)

8 Write a short note on the following:
   a. Quality and processes.
   b. Risk planning.
   c. Test and analysis strategies & plan.
   d. Quality goal. (20 Marks)

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