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 life cycle 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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