USN | | | | | | | | | | | 06CS842

Eighth Semester B.E. Degree Examination, Dec. 2013/Jan. 2014
Software Testing

Time: 3 hrs.   Max. Marks:100

Note: *Answer FIVE full questions, selecting*
atleast TWO questions from each part.

PART – A

1 a. Define the following : i) Fault   ii) Testing   iii) Correctness   iv) Error.   **(04 Marks)**
   b. Explain the different quality attributes of software.   **(08 Marks)**
   c. What is test metric? List the various test metrics associated with software testing. Explain any two.   **(08 Marks)**

2 a. What is defect management? Explain the different activities.   **(08 Marks)**
   b. Differentiate the following :
      i) Testing and verification   ii) Inspection and walk through.   **(08 Marks)**
   c. Define the following : i) Stress testing   ii) Performance testing
                              iii) Load testing   iv) Robustness testing.   **(04 Marks)**

3 a. Explain the steps associated in creating the equivalence classes for the given problem requirements.   **(08 Marks)**
   b. With neat diagram, explain the steps in the category – partition method.   **(08 Marks)**
   c. Give equivalence classes and boundaries for the two input variables. Assuming that an item code must be in the range 99 - - - 1000 and quantity in the range 1 - - - - 100.   **(04 Marks)**

4 a. List the generic procedure which is used for generation of tests, using Cause – effect graphing.   **(04 Marks)**
   b. Explain the process of creating cause effect graph.   **(08 Marks)**
   c. Explain the fault model for predicate testing.   **(08 Marks)**

PART – B

5 a. Define the following : i) Statement coverage   ii) branch coverage
                              iii) Basic condition coverage   iv) path coverage.   **(04 Marks)**
   b. Explain the following : i) Branch testing   ii) Path testing.   **(08 Marks)**
   c. Explain with an example, how statement adequacy criterion is not sufficient to identify faults in the code.   **(08 Marks)**

6 a. What do you understand by definition use pairs? Draw control flow graph for GCD method.   **(04 Marks)**
   b. Explain inter procedural analysis with example.   **(08 Marks)**
   c. Explain in detail, the data flow testing criteria.   **(08 Marks)**

7 a. Define the following : i) Test case   ii) Test case specification
                              iii) Test suite   iv) Test execution.   **(04 Marks)**
   b. What is test oracle? Explain test oracles.   **(08 Marks)**
   b. Explain the following : i) Test case specification to test cases ii) Capture and replay.   **(08 Marks)**

8 Write shot notes on :
   a. Quality process
   b. System testing
   c. Acceptance testing
   d. Regression testing.   **(20 Marks)**

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