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Roll No ....

MSE - 204

M.E./M.Tech., II Semester

Examination, June 2014

Software Verification Validation And Testing

Time : Three Hours

Maximum Marks : 70

Note : Total number of questions eight. Attempt any five questions (including all parts). Assume missing data, if any, suitably.

1. a) Explain the difference between software verification and validation. Also discuss the activities performed in each.
   b) Explain the following with the help of suitable example:
      i) Verification of Architecture Design
      ii) Verification of Data Design.

2. a) Which of the following defines the expected results of a test? Test case specification or test design specification. Explain your answer in detail.
   b) Explain the following:
      i) Technical review
      ii) Inspection process
      iii) Structured walkthrough
      iv) Advantages of Static Testing

3. a) List the generic procedure which is used for generation of tests, Using cause-effect graphing.
   b) Differentiate between a software measure, software metric and software measurement with the help of examples?

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   c) What do you understand by definition use pairs? Draw the control graph of GCD method.

4. a) Discuss the importance of the following.
      i) Gorilla testing   ii) Stress testing
      iii) Load testing
   b) Verify the following statements
      i) A software can be correct and still not reliable
      ii) Adherence to coding standards is checked during the system-testing phase.

5. a) How the Boolean expressions can be used in the test case design?
   b) Explain the following test: (i) Installation testing (ii) Usability testing (iii) Performance testing.

6. a) Write a module (in PDL) to find the different types of roots of a quadratic equation : (i) Give flow graph? (ii) Find cyclomatic complexity? (iii) Find basic test paths (iv) Derive test cases?
   b) From a Testing perspective, what are the Main purposes of Configuration Management?

7. a) Write a note on automated testing tools?
   b) What is security testing and what are the main things to test in security testing?
   c) Explain the branch testing, with an example.

8. a) Explain the need of requirement tracker in system testing.
   b) Discuss WinRunner and Load Runner in detail.

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