10IS65

Sixth Semester B.E. Degree Examination, Jan./Feb. 2023
Software Testing

Time: 3 hrs.   Max. Marks:100

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

PART – A

1 a. Why do we test software? Discuss what is a test case and what test case information should include. **(08 Marks)**
   b. Differentiate between functional testing and structural testing. **(04 Marks)**
   c. With a neat diagram, explain the SATM (Simple Automated Teller Machine) system. **(08 Marks)**

2 a. Explain with an example the process of boundary value analysis. **(08 Marks)**
   b. Define equivalence class testing. Write weak robust equivalence class testing for commission problem. **(08 Marks)**
   c. Define the basic decision table terms. **(04 Marks)**

3 a. Explain test coverage metrics and basis path testing with an example. **(10 Marks)**
   b. Explain slice-based testing guidelines and observation in detail. **(10 Marks)**

4 a. Explain traditional view of testing levels and alternative life cycle models. **(10 Marks)**
   b. Explain in detail all graph-based and path based integration with an example. **(10 Marks)**

PART – B

5 a. What is a thread? Explain basic concepts used in requirement specification to identify it to support tester process. **(08 Marks)**
   b. What are differences between progression and regression testing? **(04 Marks)**
   c. Explain taxonomy of interaction testing and explain any two of them in brief. **(08 Marks)**

6 a. Explain in detail, validation and verification and their differences. **(10 Marks)**
   b. Define (i) Degrees of freedom   (ii) Sensitivity   (iii) Redundancy   (iv) Restriction
      (v) Partition   (vi) Feedback and explain any one of them. **(10 Marks)**

7 a. Briefly explain the terminologies of fault based testing and mutation analysis. **(10 Marks)**
   b. Discuss (i) Scaffolding   (ii) Test oracle. **(10 Marks)**

8 Write short notes on:
   a. Quality process
   b. Risk Management
   c. Organizing documents
   d. Test and analysis report. **(20 Marks)**

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