10CS842

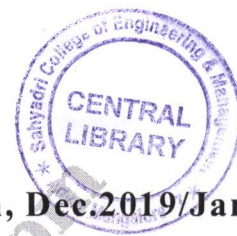# Eighth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Software Testing

Time: 3 hrs.   Max. Marks:100

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

PART – A

1 a. Define the following : i) Error ii) Fault iii) Failure iv) Incident v) Test case. **(05 Marks)**
   b. Difference between functional testing and structured testing. **(08 Marks)**
   c. Explain the triangle problem statement along with flow chart for traditional implementation. **(07 Marks)**

2 a. Explain about boundary value analysis and mention its limitations. **(04 Marks)**
   b. Explain weak normal and strong robust equivalence class testing with next data problem an example. **(04 Marks)**
   c. With neat figure, explain about :
      i) Robustness testing ii) Worst case testing. **(06 Marks)**
   d. Discuss the usage of decision table method to device test cases with example of commission problem and 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. Explain test coverage metrics and basis path testing with example. **(08 Marks)**
   c. Explain Slice based testing guidelines and observation in detail. **(04 Marks)**

4 a. Explain the decomposition based integration with an example. **(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 taxonomy of interactions, interaction, composition and determinism in software 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 six principles that characterize various approaches and technique for analysis and attesting. **(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 goal
   b. Test and analysis strategies and plan
   c. Test planning
   d. Quality and processes. **(20 Marks)**

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