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10IS65

Sixth Semester B.E. Degree Examination, Jan./Feb. 2021
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. Explain the database diagram for structured implementation of triangle program. (06 Marks)
b. Explain functional testing and structural testing along with Venn diagrams for test case identification. (06 Marks)
c. With a neat diagram, explain the ASTM system. (08 Marks)
- 2 a. Justify the usage of boundary value analysis with a function of two variables and highlight its limitations. (06 Marks)
b. Explain different types of equivalence class testing methods the device test cases with “Next Date” function as an example. (08 Marks)
c. Discuss the decision table based testing with triangle program as an examples and device the test cases using decision table for triangle program. (06 Marks)
- 3 a. With a neat diagram, explain the Rapps – Weyuker dataflow coverage metrics. (05 Marks)
b. Explain how essential complexity can be achieved by condensing the DD – path graph with respect to structural programming constructs by taking triangle program DD – path graph as an example. (07 Marks)
c. Write the program and generate the program graph for commission problem to identify “du – paths” of the following variables. And state whether these :du – paths” are definition clear or not. i) locks ii) totalLocks iii) totalStocks iv) sales. (08 Marks)
- 4 a. Explain simple SATM application with the help of i) Level I data flow diagram ii) Upper level finite state machine iii) Pin entry finite state machine. (10 Marks)
b. Explain Call – graph based integration with the help of pairwise integration and neighborhood integration. (06 Marks)
c. Explain Top – Down integration and bottom up integration. (04 Marks)

PART – B

- 5 a. What is a Thread? Explain basic concepts used in requirement specification. (10 Marks)
b. Explain different types of interactions, with an example. (10 Marks)
- 6 a. Explain Verification tradeoff dimensions. (06 Marks)
b. Explain i) Sensitivity ii) Restriction. (06 Marks)
c. Explain the dependability properties in process framework. (08 Marks)
- 7 a. Explain Fault-based adequacy criteria. (06 Marks)
b. What is Scaffolding? Explain briefly Generic Vs Specific scaffolding. (08 Marks)
c. Explain Mutation analysis software fault based testing. (06 Marks)
- 8 a. Explain in detail Organising documents with an document template. (06 Marks)
b. Explain in brief: i) Clean room process model ii) Walk through and Inspection. (08 Marks)
c. Write short note on “Quality and Process”. (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.