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Sixth Semester B.E. Degree Examination, June/July 2019
Software Testing

Time: 3 hrs.

Max. Marks: 100

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

PART – A

- 1 a. Explain error, faults and failures in the process of programming and testing with a flow diagram. (04 Marks)
- b. Draw the data flow diagram for a structured triangle program implementation and write pseudo code to solve the triangle problem defined as followed: Accept three integers which are supposed to be three sides of a triangle and determine if the three values represent an equilateral triangle, isosceles triangle, scalene triangle, or they do not form a triangle at all. Assume that upper limit for the size of any side in 20. (08 Marks)
- c. Explain the SATM problem statement and SATM screens. (08 Marks)
- 2 a. Derive boundary analysis test cases for commission problem. (08 Marks)
- b. Specify the conditions and derive test cases for neat data function program (third try) using decision table method, make necessary assumptions. (12 Marks)
- 3 a. Justify strongly connected graph is the number of linearly independent circuits in the graph using cyclomatic complexity metric. (08 Marks)
- b. Explain Rapps/Weyuker hierarchy of data flow coverage metrics. (06 Marks)
- c. Explain style and technique to find slice of program. (06 Marks)
- 4 a. With neat diagram, explain the traditional view of testing levels of waterfall life cycle. (08 Marks)
- b. What is decomposition based integration? Define the different types of decomposition based integration. (12 Marks)

PART – B

- 5 a. Explain basic concepts for requirement specification with E – R model and modeling relationship among basic constructs. (10 Marks)
- b. Define taxonomy of interactions. Explain static interactions in single processor and multi processor. (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. List the six principles that characterize various approaches and technique for analysis and testing Explain any three in detail. (07 Marks)
- c. Briefly discuss the dependability properties in process framework. (05 Marks)
- 7 a. Explain the fault-based adequacy criteria in detail. (06 Marks)
- b. Define scaffolding. Distinguish between Generic versus specific scaffolding. (08 Marks)
- c. Describe the test oracle with a neat diagram. (06 Marks)
- 8 a. Briefly explain Quality and process. (06 Marks)
- b. Explain Clean – room process, with neat diagram. (08 Marks)
- c. Describe organizing documents in detail. (06 Marks)

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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.