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 he 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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