USN | | | | | | | | | |　　　　　　　　　　　　　**10CS842**

Eighth Semester B.E. Degree Examination, June/July 2023
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.　With the help of flow chart, explain the traditional implementation of triangle problem.
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(10 Marks)
　　b.　Define testing. Explain with diagram testing life cycle.　　　　**(05 Marks)**
　　c.　Bring out the difference between structural testing and functional testing.　**(05 Marks)**

2　a.　What is decision table? Develop a decision table for triangle problem with their preconditions and rule counts.　　　　　　　　　　　　　**(10 Marks)**
　　b.　Explain boundary value analysis with their limitations.　　　　**(05 Marks)**
　　c.　What is equivalence class testing? Explain strong normal equivalence class testing.
　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　(05 Marks)

3　a.　For the program graph G(P) and set of program variables 'V', define the following with respect to define/use testing with example:
　　　　(i)　　Defining node.
　　　　(ii)　 Usage node.
　　　　(iii)　Predicate node
　　　　(iv)　Definition use path.
　　　　(v)　　Definition clear path.　　　　　　　　　　　　　　**(10 Marks)**
　　b.　Explain McCabe's Basis path method.　　　　　　　　　　　**(05 Marks)**
　　c.　Explain structural test coverage metrics.　　　　　　　　　　**(05 Marks)**

4　a.　With necessary diagram, explain the following :
　　　　(i)　　Top down integration.　　　　(ii)　　Bottom up integration.　**(10 Marks)**
　　b.　Explain level 1 DFD of SATM system with neat diagram.　　　**(10 Marks)**

PART – B

5　a.　Explain the basis concepts of requirement specification.　　　**(10 Marks)**
　　b.　Explain client/server testing.　　　　　　　　　　　　　　**(10 Marks)**

6　a.　With neat diagram, explain verification and validation activities.　**(10 Marks)**
　　b.　Explain dependability properties.　　　　　　　　　　　　**(10 Marks)**

7　a.　Explain Mutation analysis fault based adequacy criteria.　　　**(10 Marks)**
　　b.　What is Scaffolding? Explain Generic versus specific scaffolding.　**(10 Marks)**

8　　　Write a short note on:
　　a.　Quality process.
　　b.　Clean room process model.
　　c.　Test design specification documents.
　　d.　Analysis and Test plan.　　　　　　　　　　　　　　　　**(20 Marks)**

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