USN ☐☐☐☐☐☐☐☐☐☐ **10CS842**

Eighth Semester B.E. Degree Examination, Dec.2018/Jan.2019
Software Testing

Time: 3 hrs.   Max. Marks:100

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

PART – A

1 a. Explain with a neat diagram testing and debugging cycle. **(08 Marks)**
   b. How do you measure software quality? Discuss correctness versus reliability pertaining to program. **(08 Marks)**
   c. What is black box testing? How is it differing from white box testing? **(04 Marks)**

2 a. Explain decision table testing and generate test cases for triangle problem using decision table. **(08 Marks)**
   b. Briefly explain weak normal and strong robust equivalence class testing with next date problem as an example. **(08 Marks)**
   c. With neat figure, explain about,
        (i)   Robustness testing
        (ii) Worst case testing **(04 Marks)**

3 a. Design a program graph and DD-path graph for the commission program. **(10 Marks)**
   b. Explain Millers test metrics which are based on program graphs. **(05 Marks)**
   c. What is Slice testing? Explain about style and technique to find slice of program. **(05 Marks)**

4 a. Describe top down and bottom up integration strategies. **(10 Marks)**
   b. Explain the simple ATM application with the help of,
        (i)   Level 1 data flow diagram.
        (ii) Upper level finite state machine. **(10 Marks)**

PART – B

5 a. Define the below terms:
        (i) MM-path   (ii) Data   (iii) Actions   (iv) Ports. **(08 Marks)**
   b. What is interaction testing? Explain four basic types of interactions? **(07 Marks)**
   c. Write short note on client / server testing. **(05 Marks)**

6 a. Explain sensitivity and redundancy. **(06 Marks)**
   b. What is dependability in software quality control? Briefly discuss the dependability properties in process framework. **(07 Marks)**
   c. Why organizational factors are needed in process framework? **(07 Marks)**

7 a. What is fault based testing? What are the assumptions in the fault base testing? **(07 Marks)**
   b. What is scaffolding? Explain briefly generic versus specific scaffolding. **(07 Marks)**
   c. What are test oracles? Explain comparison based oracles. **(06 Marks)**

8 a. Explain clean room process, with neat diagram. **(10 Marks)**
   b. Explain risk management in the quality plan. **(10 Marks)**

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