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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belagavi)
Fifth Semester, Master of Computer Applications (MCA)
Semester End Examination; Dec - 2017/Jan - 2018
Software Testing and Practices

Time: 3 hrs   Max. Marks: 100

Note: Answer **FIVE** full questions, selecting **ONE** full question from each unit.

UNIT - I

1	a.	With a neat diagram, explain Test-Generation Strategies.	10
	b.	Define Test Metrics. With a neat diagram, show a classification of various types of metrics and explain.	10
2	a.	Explain test and debug cycle with a diagram.	10
	b.	Write a note on: i) Correctness versus Reliability ii) Software and Hardware Testing.	10

UNIT - II

3	a.	Explain the two fundamental approaches that are used to identify test cases.	10
	b.	Define Robustness Boundary value testing. Write 10 Robust test cases for triangle problem with the range $1 \le a \le 10$, $1 \le b \le 10$ and $1 \le c \le 10$.	10
4	a.	Define Equivalence class testing. Write 10 strong normal Equivalence class test cases for Next Date function with expected output.	10
	b.	Explain decision table-based testing. Explain Rule counts for a decision table with mutually exclusive conditions of date function.	10

UNIT - III

5	a.	Write McCabe's Control graph. Identify all possible paths by using McCabe's principle.	10
	b.	With a flow chart, explain Rapps-Weyuker hierarchy of dataflow coverage metrics.	10
6	a.	Explain Rapid prototyping life cycle with a neat diagram.	10
	b.	List the du-paths for the commission problem.	10

UNIT - IV

7	a.	Explain five basic principles of testing.	10
	b.	Define fault-based testing. Explain fault-based testing terminologies.	10
8	a.	Define Scaffolding. Explain generic versus specific scaffolding.	10
	b.	Define test Oracles. With a diagram, explain comparison-based and self-checks Oracles.	10

UNIT - V

9 a. What is Test specification? List and explain different Testing terms. 10

  b. Write a note on :

    i) Quality and Process 10

    ii) Test strategies.

10 a. Explain organizing documents and test strategy document. 10

  b. Write a note on :

    i) Test design specification documents 10

    ii) Test and Analysis reports.

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