



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

(An Autonomous Institution affiliated to VTU, Belgaum)

Fifth Semester, Master of Computer Applications (MCA)

Semester End Examination; Dec - 2016/Jan - 2017

Software Testing and Practices

Time: 3 hrs

Max. Marks: 100

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

UNIT - I

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| 1 a. | Explain the test and debug cycle with a neat diagram. | 10 |
| | b. List and explain different test metrics used in software testing. | 10 |
| 2 a. | Demonstrate Test generation strategies. | 10 |
| | b. List and explain software quality attributes. | 10 |

UNIT - II

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| 3 a. | Compare and contrast functional testing versus structural testing. | 5 |
| | b. Describe levels of testing with a suitable diagram. | 5 |
| | c. What are the different forms of equivalence class testing? Explain each of them with suitable pictorial representation. | 10 |
| 4 a. | Write short notes on: i) Boundary value testing ii) Robustness testing. | 10 |
| | b. Explain the decision table based testing technique and draw the decision table for triangle problem. | 10 |

UNIT - III

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| 5 a. | What is a DD path? Draw the program graph for triangle problem and list out the DD paths. | 10 |
| | b. Explain alternative life cycle models with a neat diagram. | 10 |
| 6 a. | Describe the McCabe's basis path method. | 10 |
| | b. List the du-paths for the commission problem. | 10 |

UNIT - IV

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| 7 a. | Explain mutation analysis. | 10 |
| | b. What is a test oracle? Explain comparison-based oracle. | 10 |
| 8 a. | Explain any five basis analysis and testing principles. | 10 |
| | b. Discuss various types of scaffolding. | 10 |

UNIT - V

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| 9 a. | Describe any five major activities in a planning and monitoring the process. | 10 |
| | b. List the main categories of documents. Explain these categories with the type of documents. | 10 |
| 10 a. | Explain the following with respect to planning and monitoring the process : | 10 |
| | i) Quality and Process ii) Test and Analysis Strategies. | 10 |
| | b. Explain organizing documents and Test Strategy Document. | 10 |