



U.S.N

--	--	--	--	--	--	--	--	--	--

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

(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester, B.E. - Computer Science and Engineering

Semester End Examination; May/June - 2018

Software Testing

Time: 3 hrs

Max. Marks: 100

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

UNIT - I

- 1 a. Explain with a neat diagram, Errors, Fault, Failure, Incident, Test and Test cases in the process of programming and testing. 10
- b. With a neat sketch, explain the features of 'The SATM' system. 10
- 2 a. With a neat diagram, explain the currency converter and Saturn wind shield wiper controller. 10
- b. Explain different levels of testing with a neat sketch and list the differences in brief. 10

UNIT - II

- 3 a. Describe the steps involved in a systematic procedure for equivalence partitioning by considering an application that takes two input x and y where $3 \leq x \leq 7$ and $5 \leq y \leq 9$ with a geometric representation of equivalence classes. 10
- b. Explain with a figure, the different steps involved in the generation of tests using the category partition method. 10
- 4 a. Explain Decision Table based testing with an example of Test cases for the triangle problem. 10
- b. Explain the following : 10
 - i) Robustness testing
 - ii) Special value Testing

UNIT - III

- 5 a. Define path. What are DD paths? Draw the program graph for triangle problem with suitable test cases. 10
- b. Discuss the following with an example :
 - i) Slice-based testing
 - ii) Definition-use testing
- 6 a. With a neat sketch, explain call graph-based testing with an example of SATM system. 10
- b. Discuss the following with an example :
 - i) Decomposition based testing
 - ii) Path-based integration.

UNIT - IV

- 7 a. Briefly explain about functional strategies for thread testing. 10
- b. Briefly explain, Atomic system functions testing with an example. 10

Contd...2

- 8 a. With a neat diagram, explain the relation of verification and validation activities with respect to artifact produced in software development project. 10
- b. Explain the sin principles that characterize various approaches and techniques for analysis and testing. 10

UNIT - V

- 9 a. Define scaffolding, distinguish between Generic versus Specific scaffolding briefly. 10
- b. Explain about :
 - i) Test Oracle 10
 - ii) Capture and Relay
 - iii) Test Cases
- 10. Write a short note on :
 - i) Risk Planning
 - ii) Quality and process 20
 - iii) Test and analysis strategies and plan
 - iv) Quality goal

* * * *