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10IS65

CENTRAL LIBRARY

Sixth Semester B.E. Degree Examination, June/July 2016
Software Testing

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, selecting atleast TWO questions from each part.***

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

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PART – A

1 a. What is software testing? Why it is so important in software development life cycle? **(06 Marks)**

b. Define the following : i) Error ii) fault iii) failure iv) incident v) test vi) test case. **(06 Marks)**

c. Explain with a neat diagram the currency converter and Saturn wind shield wiper controller. **(08 Marks)**

2 a. Justify the usage of boundary value analysis with function of two variables and highlight the limitations of BVA. **(08 Marks)**

b. Briefly explain weak normal and strong robust equivalence class testing with an example. **(08 Marks)**

c. Write a short note on random testing. **(04 Marks)**

3 a. What is cyclomatic complexity? Explain how to calculate cyclomatic complexity of a given program by considering the biggest of three number logic. **(08 Marks)**

b. Explain slice –based testing guidelines and observations in detail. **(08 Marks)**

c. Write a short note on define/use testing. **(04 Marks)**

4 a. With a neat diagram explain the waterfall life cycle and clearly show partial functional decomposition of the ATM system. **(08 Marks)**

b. List and explain pros and cons of the water fall model. **(04 Marks)**

c. With supporting diagrams and examples explain top-down and bottom-up integration. **(08 Marks)**

PART – B

5 a. Explain the basis concept for requirements specification. **(12 Marks)**

b. Explain with supporting diagram the client server testing. **(08 Marks)**

6 a. Define validation. With a neat sketch explain the relation of verification and validation activities with respect to artifacts produced in a software development project. **(10 Marks)**

b. Explain sensitivity and redundancy. **(06 Marks)**

c. Define the terms reliability and availability. **(04 Marks)**

7 a. Distinguish between :

i) Competent programmer hypothesis and coupling effect hypothesis

ii) Distinguished mutant and equivalent mutant. **(04 Marks)**

b. Explain the fault–based adequacy criteria. **(08 Marks)**

c. What is scaffolding? Explain briefly generic versus specific scaffolding. **(08 Marks)**

8 Write short notes on :

a. Clean room process. **(06 Marks)**

b. Different types of risks specific to the quality process. **(06 Marks)**

c. A standard organization of an analysis and test plan. **(08 Marks)**

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