FIT3142 Tutorial #6
Reliability in Distributed Computing

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Contents

1 Tutorial Format

Preparation is required for this tutorial. Do not plan to complete the tutorial preparation during the tutorial.

Students should produce written answers to the tutorial questions prior to starting the tutorial.

The answers will be reviewed in a question and answer format during the tutorial. Each student will explain their answer.

Students will need to submit their answers by 9am Tuesday of the week via Moodle [Turnitin].

All questions are based on lecture slides, and lecture slides are in effect the "answer sheets" for these tutorials.

Worked answers **will not be posted after tutorials as the answers are already in the lecture slides**.

2 Tutorial Questions

2.1 Question 1 (25%)

Explain the difference between *random failures* and *wearout failures*. Why does this difference matter?

2.2 Question 2 (25%)

Explain the difference between *serial system* and *parallel system*. What is *Lusser's Product Law*? What is a *Cascade Failure*?

2.3 Question 3 (25%)

Explain the six most common causes of software faults. What are the three most common methods for runtime detection of software faults?

2.4 Question 4 (25%)

Explain the difference between the *Dormant Fault Problem* and the *Complex System Problem*. Why is testing often ineffective?