

2000 Paper 2 Question 8

Software Engineering I

One means of improving system reliability is to have three or more replicated systems and act on their majority output. Give *two* examples of failure that can be stopped by the mechanism, and *two* which cannot. At least one of each type should be illustrated by an actual case history or application. [12 marks]

An engineer attempts to improve the reliability of such a system further by multiversion programming – by having three separate systems coded by different teams and possibly in different languages. Discuss what might still go wrong. [8 marks]