**Testing and Security Questions and Answers**

**Question**

1. Explain the difference between the Functional Test and Non-Functional Test

(1 marks)

1. What do you understand by the term ‘stress testing’? Suggest how you might stress test the Mentcare system.

(1 marks)

1. For the Mentcare system, suggest an example of an asset, an exposure, a vulnerability, an attack, a threat and a control, in addition to those discussed in this chapter.

(2 marks)

**Answers**

1. Explain the difference between the Functional Test and Non-Functional Test

(1 marks)

**Functional Testing**

to show that the system delivers its specified functionality, and that it covers all the requirements does not fail during normal use.

**Non-Functional Testing**

to show that the system delivers its specified reliability, performance, security and dependability, and that it does not fail during normal use.

1. What do you understand by the term ‘stress testing’? Suggest how you might stress test the Mentcare system. (2 marks)

Stress testing is where you deliberately increase the load on a system beyond its design limit to see how it copes with high loads. The system should degrade gracefully rather than collapse.

The Mentcare system has been designed as a client-server system with the possibility of downloading to a client. To stress test the system, you need to arrange for (a) many different clinics to try and access the system at the same time and (b) Large numbers of records to be added to the system. This may involve using a simulation system to simulate multiple users.

1. For the Mentcare system, suggest an example of an asset, an exposure, a vulnerability, an attack, a threat and a control, in addition to those discussed in this chapter. (2 marks)

Asset Local database stored on nurses laptop or clinic PC

Exposure Moderate. Loss of consultation records. Clinical consequences possible if

Vulnerability Nurse or doctor leave consultation with patient but leave themselves logged into system

Attack Patient accesses unattended system

Threat Patient deletes or corrupts patient records held in local database.

Control Log all actions and support ‘undo’ of log actions. Require password to open individual patient records.