

Critical systems requirements 3

Name:

1. What should safety requirements engineering be integrated with other RE processes?

Safety is not an isolated system property but must be considered alongside other properties. Requirements conflicts and trade-offs are harder to make if safety requirements are separate. Risks and hazards only emerge once other requirements have been identified.

2. What is a safety-critical information system?

An information system where failure may result in indirect harm to people because the information is interpreted or used in other processes. For example, a CAD system that computes load incorrectly could mean that a building falls down because its steelwork isn't strong enough.

3. Why is it difficult to assess secondary risks?

Because the actual risk is associated with other systems so you must know which other systems use the data from the safety-critical information system.

4. What is a data hazard? Give examples of data hazards.

Hazards associated with the system data rather than the system software.

Data missing, data incorrect, data inconsistent, data unreadable

5. What is a concern? Give two examples?

Cross-cutting issues that affect all aspects of the system

Safety and Security are possible examples of concerns

6. How do concerns bridge the gap between organisational goals and system requirements?

Concerns are derived from organisational goals and are decomposed during the RE process to identify requirements. These requirements therefore should help deliver the organisational goals.

7. Explain why a distributed patient information system for mental health care is useful.

Patients do not always attend the same clinic but may go to different clinics in different hospitals. Patients cannot be relied upon to provide reliable information because they may be confused and disorganised, deliberately or accidentally lose medication, forget instructions, etc.

8. What have been identified as the key concerns in the MHCPMS?

Safety
Privacy
Information quality
Operational costs