

IKPEZE VICTORIA KAMNETOCHI

15/ENG01/007

500L CHEMICAL ENGINEERING

CHE 512: LOSS PREVENTION AND INDUSTRIAL LAW ASSIGNMENT

Question 1: Briefly Discuss Hazard Operability Technique

Ans:

Hazard Operability (HAZOP) Technique is a risk management technique used to identify potential hazards and functional flaws in existing or planned plant systems. The technique or analysis identifies hazards and operability problems in a process plant. It is a tool for identification of hazards due to process parameter deviations. The technique is based on breaking the overall complex design of the process into a number of simpler sections called 'nodes' which are then individually reviewed. The concept involves investigating how the process plant may deviate from the design intent. In doing this, several experts with different backgrounds review the plant operation in a series of meetings during which the multi-disciplinary team methodically brainstorms the plant design together rather than working separately. Its purpose is to reduce risk and ensure the safety of workers in plant environments.

Question 2: State the significance of HAZOP Technique

Ans:

The intention of performing a HAZOP is to review the design to pick up design and engineering issues that may otherwise not have been found. The HAZOP technique is significant as it has been used with great success within chemical and the petroleum industry to obtain *safer, more efficient* and *more reliable* plants.

Question 3: With the aid of a block diagram, list the components of hazard operability.

Ans:

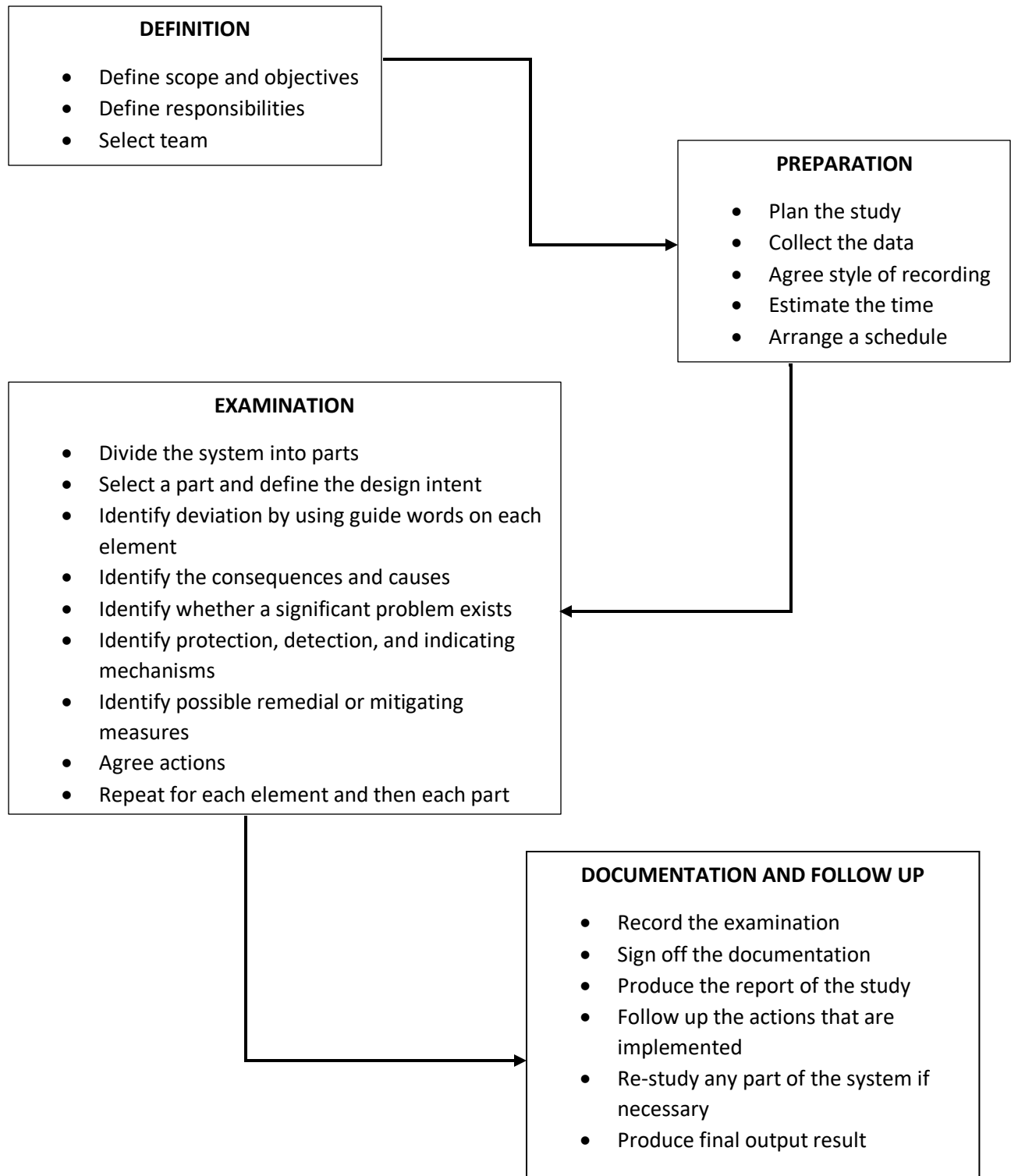


Figure 1: Block Diagram Indicating Components of Hazard Operability