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MATRIC NO: 15/ENG01/004

DEPARTMENT: CHEMICAL ENGINEERING

ASSIGNMENT TITLE: HAZARD OPERABILITY TECHNIQUE

COURSE TITLE: LOSS PREVENTION AND INDUSTRIAL LAW

COURSE CODE: CHE 512

1. Briefly discuss hazard operability technique

A Hazard and Operability Analysis (HAZOP) technique is a risk management technique used to identify potential hazards and functional flaws in existing or planned plant systems. HAZOP is based on the assumption that hazards happen because elements of design and operation can deviate from their original intention. A HAZOP study is performed by an interdisciplinary team of experts including engineers, chemists, facilities managers and safety officers to identify procedural risks, process hazards, and design flaws. The HAZOP team discusses possible deviations and come up with different scenarios where the system or process could fail. The team can then propose recommendations for safeguards and improvements to lower the risk of identified hazards and operational failures from occurring

2. State the significance of HAZOP technique

Its significance is to reduce risk and ensure the safety of workers in plant environments. It is primarily used to study complex operational hazards and functions in chemical processing plants but is also used in nuclear, water, sewage, and treatment plants.

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

THE HAZOP PROCESS

SELECT EQUIPMENT NODE

**CHOOSE DEVIATION OR
PARAMETERS & GUIDE WORDS**

IDENTIFY CAUSES

ASSOCIATE CONSEQUENCES

APPLY RISK RANKING

AGREE ACTIONS TO BE TAKEN

MONITOR ACTIONS FOR COMPLETION