R09

Code No: C5104
JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M.Tech I Semester Examinations March/April-2011
CHEMICAL PROCESS SAFETY
(CHEMICAL ENGINEERING)

Time: 3hours   **Max.Marks:60**

Answer any five questions
All questions carry equal marks
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1.   Explain the safety measures to be followed in a process industry located in India.   [12]

2.   Explain the DOW procedures for safety assessment.   [12]

3.   As a Chemical Engineer, suggest the different safety methods be followed to avoid accidents like Flixborough Chemical Plant Disaster.   [12]

4. a)   Explain: Confined and Unconfined explosions.
   b)   Explain with a neat figure: Explosion apparatus for Dusts.   [12]

5.   Explain: HAZOP analysis in detail. Also, Explain FAULT TREE Analysis.
   [12]

6.   Explain:
   a) OSHA   b)   EPA.   [12]

7. a)   Write the equations for LFL $_{Mix}$ & UFL $_{Mix}$.
   b)   What are the LFL and UFL of a gas mixture composed of 0.8% hexane, 2.0% methane, and 0.5% ethylene by volume?   [12]

8.   Explain the static electricity with any case study in process industry.   [12]

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