

COURSE: M.TECH (CHEMICAL ENGG), 1ST SEM,

ASSIGNMENT NO:2

Due date of submission: 10.11.2016

Instructions

- 1. Write the response to the assignment in your own handwriting.**
- 2. Submit the response to your HOD within the due dates**
- 3. Write your name, programmed and enrolment No. clearly at top of the page.**

Q1)

- a) Explain molecular distillation process?
- b) Explain complete mixing model for reverse osmosis membrane process?

Q2)

- a) Define bubble point.
- b) Name types of equipment for reverse osmosis membrane processes?

COURSE: M.TECH (CHEMICAL ENGG), 1ST SEM,
MODELLING AND SIMULATION OF CHEMICAL ENGG SYSTEM MT-CHE-113

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Q1)

A) Design a mathematical model for packed absorption column. Take suitable assumptions.

B) Discuss in detail sequential molecular approach for flow sheet simulation and equation oriented approach for flow sheet simulation.

Q.2)

- a) Design a mathematical model for batch reactor.
- b) Discuss in detail differential equation and partial differential equation of numerical methods.

COURSE: M.TECH (CHEMICAL ENGG), 1ST SEM, ADVANCED POLLUTION CONTROL, MT-CHE-115

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Q1)

- a) Discuss in detail gravity settling chamber and centrifugal collector.
- B) Discuss in detail catalytic convertor.

Q.2)

- a) What are harmful effects of waste water on environment?
- b) Discuss in detail treatment techniques of solid waste management.

COURSE: M.TECH (CHEMICAL ENGG), 1ST SEM, , SAFETY HAZARDS AND RISK ANALYSIS, MT-CHE-112

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Q1)

- (a) What are the hazards from nuclear radiation and safety from these hazards?
- (b) Discuss in detail Hazard and operate ability analysis (HAZOP) analysis of safety hazard

Q2)

- (a) Describe plant layout and safety considerations in plant layout.
- (b) What are the measures to control the effects of toxic materials?