

Online Refresher Course on
CHEMICAL ENGINEERING FOR PLANT PERSONNEL

Monday-Tuesday, 23 & 24 November 2020

PROGRAM

Day 1: 1.30 pm to 5.00 pm	
01.30 - 01.35 p.m.	Welcome by: ICC
01.35 - 02.30 p.m.	Lecture-1: Chemical Engineering Basics & Calculations by: Prof. Parag R. Gogate, ICT, Mumbai A. Units & Conversions B. Concepts of Mole, Vapor Pressure, Humidity, Stoichiometry C. Material Balance computations with & without recycles D. Energy Balance: Fundamentals and Computations E. Examples
02.30 - 02.45 p.m.	RELAXATION BREAK
02.45 - 03.45 p.m.	Lecture-2: Fluid Flow Basics and Special Flow Situations by: Mr. O. P. Goyal, Ex- Chemical Industry Professional A. Reynolds number, Friction factor and Hydraulic diameter B. Bernoulli Equation, Static Head calculation, Piping pressure drop calculation C. Centrifugal pump curves. Affinity laws and interpretation D. Net positive suction head (NPSH): Required/Available E. Power consumption calculation
03.45 - 04.00 p.m.	RELAXATION BREAK
04.00 - 05.00 p.m.	Lecture-3: Chemical Reaction Engineering by: Prof. Parag R. Gogate, ICT, Mumbai A. Basics of Reaction Engineering B. Kinetics and Design equations for Reactors C. Selectivity Issues D. Multiphase reactions E. Examples
Day 2: 1.30 p.m. to 5.00 pm	
01.30 - 02.30 p.m.	Lecture-4: Practical Process Heat Transfer by: Mr. O.P. Goyal, Ex- Chemical Industry Professional A. Basics of Heat Transfer and Types of Heat Exchangers B. Design of Shell & Tube Heat Exchangers C. Design Aspects of Condensers and Thermosiphon Reboilers D. Evaluation of Practical Situations with Examples E. An Agrochemical Plant Case study
02.30 - 02.45 p.m.	RELAXATION BREAK
02.45 - 03.45 p.m.	Lecture-5: Distillation by: Prof. Parag R. Gogate, ICT, Mumbai A. Basics of mass transfer operations B. Basics of Distillation C. Design Aspects D. Column Types and internals E. Control and Operation
03.45 - 04.00 p.m.	RELAXATION BREAK
04.00 - 04.45 p.m.	Interactive Quiz by: Mr. O.P. Goyal, Ex- Chemical Industry Professional
04.45 - 05.00 p.m.	Closing Comments/ Feedback