Online Refresher Course on

"CHEMICAL ENGINEERING FOR PLANT PERSONNEL"

on Thursday-Friday, 24 & 25 June 2021

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 P. 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 Practical Examples 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 P.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 P.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**