

CH303 GENERAL CHEMICAL TECHNOLOGY – I

Credits: 5 (L = 4, P = 2)

(Pre-requisite: None)

Course Details:

Detail 1:

Survey of different sources of energy and their utilization of Fossil fuels, liquid and gaseous fuels coke-oven gas, producer gas, water gas, natural gas, LPG etc, properties and processing. Elementary idea about non-conventional energy sources, solar energy (different collector plates) wind energy, biomass energy, geothermal energy.

Detail 2:

Water treatment: Municipal water treatment. Review of different processes. Desalination, by Reverse osmosis and electro dialysis. General scheme of primary, secondary and tertiary treatments of wastewater.

Detail 3:

Study of selected chemicals. With special references to the aspects of major manufacturing process, raw materials and utilities, physico-chemical parameter, unit processes and operations, material of construction of major equipment, By products and waste treatment. (a) Soda ash, Cement, Glass (b) Paper & Pulp Industries (c) Industrial gases (CO₂, H₂, He, N₂) (With reference to cryogenic processes)

Fertilizer technology concept of simple, compound and complex fertilizer:

Urea, ammonium sulphate potastic fertilizer, single and triple super phosphate, Recent advances in fertilizer technology, slow release and suspension fertilizer, Bioferlilzer.

Reference Books:

Chemical Process Industries 5th Ed.:

M Graw Hill

George T Austin

Out lines of Chemical Technology:

East west Publication

E E Dryden

Fuels and Combustions:

Orient Longman Ltd.

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