

# UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING, ROURKELA



## LESSON PLAN

**SUBJECT-CHEMICAL PROCESS INDUSTRY-II  
PREPARED BY- SATARUPA SAHU**

### **DEPARTMENT OF CHEMICAL ENGINEERING**

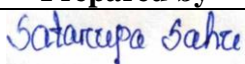

	Topics covered
WEEK 1	Definition of Pesticides
	General classification of Pesticides
	Classification based on Composition of Pesticides
	Manufacturers of India and Chemical Reactions involved in DDT manufacturing
WEEK 2	Flow diagram description of DDT
	Process description of manufacturing of DDT
	Define paints, varnishes, lacquers, enamels
WEEK 3	Difference between paints and varnishes, Difference between lacquers, enamels
	Constituents of paints and their characteristics
	Manufacturing process of paints
	Manufacturing process of varnishes
WEEK 4	Latest advances in paint technology
	Definition of explosives and classification
	Difference between high and low explosives and their characteristics
	Blasting agent and slurry explosive
WEEK 5	Manufacturing of cellulose nitrate
	Manufacturing of nitro-glycerine
	Manufacturing of dynamite
	Definition of Plastic/Polymer, Classification of Polymer
WEEK 6	Manufacturing of phenol formaldehyde one step resin method with their properties and uses.
	Manufacturing of phenol formaldehyde two step resin method
	Manufacturing of urea formaldehyde with their properties and uses
	Manufacturing of polyethylene with their properties and uses
WEEK 7	Manufacturing of P.V.C with their properties and uses.
	Definition of Fiber and Classification fiber

	Manufacturing of Nylon with properties
	Manufacturing of Viscose rayon with properties
WEEK 8	Manufacturing of Cupro ammonium rayon with properties
	Manufacturing of Acetate rayon with properties
	Manufacturing of Polyester with properties.
	Natural and synthetic rubber and their properties
WEEK 9	Flow-sheet description for manufacturing of SBR
	Process description of SBR and their properties
	Flow-sheet description for manufacturing of NBR
	Process description of NBR and their properties
WEEK 10	Revision and Quiz Test
	Flow-sheet description for manufacturing of cane sugar
	Process description of cane sugar and their properties
	Flow-sheet description for manufacturing of industrial alcohol
WEEK 11	Process description of industrial alcohol and their properties
	Classification of alcoholic beverages
	Manufacture of Beer
	Classify different types of oil
WEEK 12	Flow-sheet description for extraction of oil
	Process description for manufacturing of extraction of oil
	Flow-sheet description for hydrogenation of oil
	Process description for hydrogenation of oil
WEEK 13	Latest developments in edible oil production
	Definition soaps and detergent, principle of cleaning
	Detergent builders and constituents of detergent
	Flow-sheet description for manufacturing of soap
WEEK 14	Process description for manufacturing of soap
	Flow-sheet description for manufacturing of detergent
	Process description for manufacturing of detergent
	Definition pharmaceutical products
	Classification of pharmaceutical products-I
WEEK 15	Classification of pharmaceutical products-II
	Major pharmaceutical industry in India and their products
WEEK 16	Flow-sheet description for manufacturing of penicillin by fermentation
	Process description for manufacturing of penicillin by fermentation

**BOOKS FOR REFERENCE:**

Outline of Chemical Technology by Dryden, East West Press Publication.

Chemical Technology by N Shreeve, Tata Mc Grawhill Publication.

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