LESSON PLAN OF 3rd SEMESTER CHEMICAL ENGINEERING

DISCIPLINE: CHEMICAL	**Semester:-3RD**	**NAME OF THE TEACHING FACULTY** **Prince Das**
SUBJECT: FLUID MECHANICS	**No of days per Week Allotted:** **04**	**No of Weeks:-15**
Week	**Class/Day**	**Theory/PracticalTopics**
1st	1st	UnitsAndDimensions; Fluidanditsclassification
	2nd	Propertiesoffluid anditsunits
	3rd	Newton'slawofviscosity
	4th	Newtonian&Non-Newtonianfluid
2nd	1st	Hydrostaticequilibriumandpressurehead
	2nd	Fluidpressuremeasuringdevices
	3rd	Differenttypesofmanometersanditsapplications
	4th	Derivationofmanometricequation
3rd	1st	ProblemsonManometric Equation
	2nd	Equation ofcontinuity
	3rd	Problems onContinuityEquation
	4th	Types offluidflow
4th	1st	Laminarandturbulentflow
	2nd	Reynolds'snumber,criticalvelocity
	3rd	Mechanism offluidflowinpipes
	4th	Reynolds'experiment
5th	1st	Bernoulli'stheorem,pumpwork(solvesimpleproblems)
	2nd	Bernoulli'stheorem,pumpwork(solvesimpleproblems)
	3rd	Bernoulli'stheorem,pumpwork(solvesimpleproblems)
	4th	Flowofincompressiblefluids inpipe
6th	1st	Flowofincompressiblefluids inpipe

	2nd	Flowofincompressiblefluids inpipe
	3rd	Frictionfactor,roughness
	4th	Estimate frictionlossinpipes&coils,equivalentlength
7th	1st	Fanning'sequation(Solvesimpleproblems)
	2nd	Fanning'sequation(Solvesimpleproblems)
	3rd	Frictionlossesthroughsuddenenlargementinpipes
	4th	Frictionlossesthroughsuddencontractioninpipes
8th	1st	Problemsonfrictionlossesthroughsuddenenlargement inpipes
	2nd	Problemsonfrictionlossesthroughsuddencontractioninpipes
	3rd	Flowoffluidsinnon-circularconduits.Waterhammer
	4th	Workingofflowmeasuringdevices,advantages&disadvantages
9th	1st	Expressionforflowmeasurementthrough orificemeter
	2nd	Expressionforflowmeasurementthroughventurimeter
	3rd	Expressionforflowmeasurementthroughpitottube
	4th	WorkingofRotameteranditscalibration
10th	1st	Simpleproblemsonflowmeasurement
	2nd	Simpleproblemsonflowmeasurement
	3rd	Simpleproblemsonflowmeasurement
	4th	Simpleproblemsonflowmeasurement
11th	1st	Conceptoftransportationoffluidbypipesandtubes
	2nd	Differentpipefittingsanditsapplication
	3rd	Differenttypes ofvalvesandtheirapplications
	4th	Classificationofpumps
12th	1st	Constructionandworkingofcentrifugalpump
	2nd	Performancecharacteristicsofcentrifugalpumps
	3rd	Cavitation,Netpositivesuctionhead,Airbinding&primingofpump

	4th	Centrifugalpumptroublesand remedies
13th	1st	Constructionandworkingofcentrifugalpump
	2nd	Performancecharacteristicsofcentrifugalpumps

	3rd	WorkingofPistonpump,plungerpump,gearpump,diaphragmpump
	4th	Pumpingdeviceforgas:blower,compressor andvacuumdevices
14th	1st	Pressuredropinporousmedium
	2nd	Conceptoffluidization
	3rd	Typesoffluidization
	4th	Minimumfluidizationvelocity
15th	1st	Fluidizedbedpressuredrop
	2nd	Principleofpneumaticconveyance
	3rd	Flowthroughpackedbed;Problemsonfluidisation
	4th	PreviousYearQuestionsPractice