

Samrat Ashok Technological Institute, Vidisha

Civil Engineering Department

Lecture Plan for Session July-Dec/ 2023

B.E. Civil (V Sem.) with effect from 24.7.2023 to 03.11.2023

Dr. Pramod Sharma

Sub: CE-1852 (Fluid Mechanics - II)

Lecture/Date	Topic/ Sub-topic	Method of Teaching	CO mapped	Bloom's Level
Lecture 1	Review of IV Sem. Fluid - I	Class Teaching	1	1 - Remembering
Lecture 2	Overview of V Sem. Fluid Mech. - II	Class Teaching	1	2-Understanding
	Unit - I			
Lecture 3	Turbulent Flow, Boundary Layer, Smooth and Rough	Class Teaching	1	2-Understanding
Lecture 4	Velocity Distribution, Commercial Pipe, Aging of pipe	Class Teaching	1	2-Understanding
Lecture 5	Losses in pipe flow and its computation	Class Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 6	Equivalent pipes, Pipes in parallel and series and its Numericals	Class Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 7	Hydraulic Gradient line and Energy Gradient line	Class Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 8	Siphon and Numericals	Class Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 9	Branching of pipe	Class Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 10	Water Hammer	Class and lab Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 11	Power transmission through pipes	Class Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 12	Hardy cross method	Class Teaching	1	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
	Unit - II			
Lecture 13	Channel elements, geometry of canal	Class Teaching	2	2-Understanding
Lecture 14	Energy in open channel and types of flow	Class Teaching	2	2-Understanding
Lecture 15	Critical flow, Critical velocity, Critical depth and its problem	Class Teaching	2	2-Understanding
Lecture 16	Chezy's formula, Kutter formula, Mannings formula	Class Teaching	2	2-Understanding
Lecture 17	Most economical section of canal and its computation	Class Teaching	2	2&3 - understanding & applying
Lecture 18	Design of Channel and problems	Class Teaching	2	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
	Unit - III			
Lecture 19	G.V.F. equation and its computation	Class Teaching	3	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 20	R.V.F. and its computation	Class Teaching	3	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 21	Hydraulic Jump and its computation	Class Teaching	3	2, 3, 4 & 5 - understanding, applying, analysing and evaluating
Lecture 22	Surgas and flow routing	Class Teaching	3	2, 3, 4 & 5 - understanding, applying, analysing and evaluating

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Lecture 23	Venturi Flumes and its computation	Class Teaching	3	2, 3, 4 & 5 - understanding, aplying, analysing and evaluating
	Unit - IV			
Lecture 24	Types of drag and lift and its computation	Class Teaching	4	2-Understanding
Lecture 25	Drag on Sphere and its computation	Class Teaching	4	2, 3, 4 & 5 - understanding, aplying, analysing and evaluating
Lecture 26	Concept of Aero foils	Class Teaching	4	2, 3, 4 & 5 - understanding, aplying, analysing and evaluating
Lecture 27	Aero foils and its computation	Class Teaching	4	2, 3, 4 & 5 - understanding, aplying, analysing and evaluating
Lecture 28	Lifting Vanes and Magnus effect	Class Teaching	4	2, 3, 4 & 5 - understanding, aplying, analysing and evaluating
	Unit - V			
Lecture 29	Types of Hydraulic Machines	Class Teaching	5	1&2 - Remembering & understanding
Lecture 30	Classification, Similarity Law, Specific speed, Unit Quantities	Class Teaching	5	1&2 - Remembering & understanding
Lecture 31	Pelton Wheel turbine and its design	Class and lab Teaching	5	1&2 - Remembering & understanding
Lecture 32	Reaction Turbine and its construction	Class and lab Teaching	5	1&2 - Remembering & understanding
Lecture 33	Reaction Turbine and its design	Class and lab Teaching	5	2, 3, 4 & 5 - understanding, aplying, analysing and evaluating
Lecture 34	Draft tube theory	Class and lab Teaching	5	2-Understanding
Lecture 35	Characteristics curves and cavitations	Class Teaching	5	2-Understanding
Lecture 36	Types of pumps their important components	Class Teaching	5	1&2 - Remembering & understanding
Lecture 37	Different type heads	Class Teaching	5	1&2 - Remembering & understanding
Lecture 38	Characteristics curves	Class Teaching	5	1&2 - Remembering & understanding
Lecture 39	Reciprocating pumps and its construction & design	Class & Lab Teaching	5	1&2 - Remembering & understanding
Lecture 40	Different type heads of Reciprocating pumps	Class & Lab Teaching	5	1&2 - Remembering & understanding
Lecture 41	Doubts Clearing Classes	Class & Lab Teaching	—	—
Lecture 42	Doubts Clearing Classes	Class & Lab Teaching	—	—
Lecture 43	Doubts Clearing Classes	Class & Lab Teaching	—	—
Lecture 44	Doubts Clearing Classes	Class & Lab Teaching	—	—
Lecture 45	Doubts Clearing Classes	Class & Lab Teaching	—	—