

GANDHI ACADEMY OF TECHNOLOGY AND ENGINEERING				
DEPARTMENT OF CIVIL ENGINEERING				
LESSON PLAN				
DISCIPLINE:-CE				
SEMESTER:-6TH	FROM DATE:-03.01.2024	TO DATE:-05.03.2024		
Name of Teaching Faculty: ANKITA JENA				
SUBJECT:-HYDRAULICS AND IRRIGATION ENGINEERING				
NO.OF PERIOD/PER WEEK CLASS ALLOTTED:-4				
TOTAL NO.OF CLASS AVAILABLE IN SEM:-60				
SL NO.	WEEK	CLASS DATE	NO. OF CLASS/DAY	TOPICS
1	Week-01	02.01.2024	1	Introduction on hydraulics and irrigation engineering
		03.01.2024	1	Properties of fluid :density ,specific gravity, surface tension,
		04.01.2024	1	Capillarity ,viscosity and their uses
		05.01.2024	1	Pressure and its measurements: Intensity of pressure, atmospheric pressure
2	Week-02	09.01.2024	1	Gauge pressure ,absolute pressure and vacuum pressure
		10.01.2024	1	Relationship between pressure and atmospheric pressure, absolute pressure gauge
		11.01.2024		HOLIDAY
		12.01.2024	1	Relationship between atmospheric pressure, absolute pressure gauge
3	Week-03	16.01.2024	1	Pressure exerted on an immersed surface: Total pressure ,resultant pressure
		17.01.2024	1	Expression for total pressure exerted on horizontal.
		18.01.2024	1	Expression for total pressure exerted on vertical surface
		19.01.2024	1	Numerical
4	Week-04	23.01.2024		HOLIDAY
		24.01.2024	1	Introduction on kinematics of fluid flow
		25.01.2024	1	Basic equation of fluid flow and their application :Rate of discharge ,equation of continuity of liquid flow
		26.01.2024		HOLIDAY
5	Week-05	30.01.2024	1	Total energy of a liquid in motion potential kinetic and pressure
		31.01.2024	1	Bernoulli's theorem and its limitations

		01.02.2024	1	Practical applications of Bernoulli equation
		02.02.2024	1	Flow over notches and weirs :notches weirs Types of notches and weirs
6	Week-06	06.02.2024	1	Discharge through different types of notches and weirs their application
		07.02.2024	1	Types of flow through the pipe: uniform and non uniform
		08.02.2024	1	Laminar and turbulent; steady and unsteady
		09.02.2024	1	Reynolds number and its application
7	Week-07	13.02.2024	1	Losses of head of a liquid flowing through pipe :different types of major and minor losses
		14.02.2024		HOLIDAY
		15.02.2024	1	Simple numerical problems on losses due to friction using darcy equation
		16.02.2024	1	Simple numerical problems on losses due to friction using darcy equation
8	Week-08	20.02.2024	1	Flow through the open channels
		21.02.2024	1	Trapezoidal and circular, discharge formula chezy and manning equation best economical section
		22.02.2024	1	Trapezoidal and circular ,discharge formulae-chezy and manning equation best economical section
		23.10.2023	1	Types of pumps
9	Week-09	27.02.2024	1	Centrifugal pump :basic principle, operation
		28.02.2024	1	Discharge , horse power and efficiency
		29.02.2024	1	Hydrology cycle
		01.03.2024	1	Rainfall :types ,intensity ,hyetograph
10	Week-10	05.03.2024		HOLIDAY
		06.03.2024	1	Estimation of rainfall ,rain gauge its types
		07.03.2024	1	Concept of catchment area types runoff ,estimation of flood discharge by dicken and ryvs formula
		08.03.2024		HOLIDAY
11	Week-11	12.03.2024	1	Water requirements of crops :definition of irrigation ,necessity
		13.03.2024	1	Crop season
		14.03.2024	1	Gross command area, cultural command area intensity of irrigation
		15.03.2024	1	Flow irrigation canal irrigation types of canal loss of water in canals
12	Week-12	19.03.2024	1	Different components of irrigation canals and their function
		20.03.2024	1	Sketches of different canal cross section
				Classification of canals according to their alignment

		21.03.2024	1	Various types of canal lining advantages and disadvantages
		22.03.2024	1	Water logging and drainage :cause and effect of water logging
13	Week-13	26.03.2024		HOLIDAY
		27.03.2024	1	Detection .prevention and remedies
		28.03.2024	1	Introduction on diversion head works and regulatory structure
		29.03.2024		HOLIDAY
14	Week-14	02.04.2024	1	Necessity and objective of diversion head works
		03.04.2024	1	Weirs and barrages
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		05.04.2024	1	General layout of barrage
15	Week-15	09.04.2024	1	Function of different parts of barrage
		10.04.2024	1	silting and scouring function of regulatory structure
		11.04.2024		HOLIDAY
		12.04.2024	1	Introduction on cross drainage works
16	Week-16	16.04.2024	1	Function and necessity of cross drainage works
		17.04.2024		HOLIDAY
		18.04.2024	1	Introduction dams
		19.04.2024	1	NECESSITY of storage reservoirs
17	Week-17	23.04.2024	1	spillways types with sketch and necessity

