

LESSON PLAN

Program Name	Civil Engineering
Subject Name	Irrigation Engineering
Subject Code	
Semester	6 th
Subject Teacher Name	Er. Amish Rehalia

Evaluation Scheme

Sr. No.	Subject Name	Study scheme (Hrs/Week)		Marks in Evaluation Scheme					
				Internal Assessment			External Assessment		
				Th	DCS	Th	Pr	Total	Th
1.	Irrigation Engineering	4		50	-	50	100	-	100
Reference Books		(i) Bharat Singh, 'Fundamentals of Irrigation Engineering', Roorkee, Nem Chand and Bros (ii) Punmia, BC; and Pande Brij Bansi Lal, 'Irrigation and Water Power Engineering', Delhi, Standard Publishers Distributors							

Course Outcomes (COs)

CO – 1	To study about Hydraulic Design Proficiency:
CO – 2	To know Crop Water Requirement Assessment:
CO – 3	To gain knowledge of Selection and Operation of Irrigation Systems:

Teaching Plan

	Name of Topic	Proposed Date	Actual Date	Remarks
Introduction	Definition and Necessity of Irrigation	31-01-2024		
	Definition and Necessity of Irrigation	31-01-2024		
	Historical development of Irrigation systems	01-02-2024		
Water Requirement of Crop	Principal crops in India and their water requirements,	03-02-2024		
	Crop/base period	07-02-2024		
	Crop seasons –Kharif and Rabi	07-02-2024		
	Duty, Factors affecting duty, Delta	08-02-2024		

	Relationship between Base period, Duty and Delta	14-02-2024		
Methods of Irrigation	Type of irrigation- Surface irrigation and sub-surface irrigation methods of supplying water to the field (Brief description)	15-02-2024		
	Free Flooding Border	15-02-2024		
	Flooding Check Flooding	17-02-2024		
	Furrow irrigation method Basin flooding	21-02-2024		
	Sprinkler irrigation with its suitability	21-02-2024		
	Drip Irrigation with its suitability	22-02-2024		
	Hydrology and Run-off	Definition, importance of hydrology	23-02-2024	
Hydrological cycle		23-02-2024		
Precipitation Definition		23-02-2024		
Types of precipitation		29-02-2024		
Rain gauges, types with diagrams		02-03-2024 05-03-2024 06-03-2024		
Runoff, Factors affecting runoff		07-03-2024		
Dams & Canals		Use of dams in irrigation Types of dams	13-03-2024	
	Construction of earthen, gravity and rock fill dams	13-03-2024		
	Construction of earthen, gravity and rock fill dams	14-03-2024		
	Alignment of canal- ridge canal, contour	16-03-2024		
	Class test -1	20-03-2024		
	canal, side slope canal	20-03-2024		
	Distribution system for canal irrigation- Main canal,	21-03-2024		
	Branch canal, Distributaries,	23-03-2024		
	water course	27-03-2024		

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	Cross-section of canal showing- Side slope,	27-03-2024		
	Berm, Freeboard, Service road,	28-03-2024		
	Spoil bank, Dowel and	30-03-2024		
	Borrow pit (with their definition & functions)	03-04-2024		
	Lining of canals and their types	03-04-2024		
	Maintenance of irrigation canal Closure of breaches	04-04-2024		
Well and Tube Well Irrigation	Open well Shallow well Deep well Construction of open well)	06-04-2024		
	Yield of open well (brief description, no derivation and numerical Pumping test Recuperating test Tube well	10-04-2024		
	Types of tube well (Brief description with neat diagram)	10-04-2024		
	Cavity type tube well Screen type tube well	18-04-2024		
	Class test -2	20-04-2024		
	Slotted type tube well	24-04-2024		
	Methods of boring tube wells, well development Advantages and	24-04-2024		
	disadvantages of tube well irrigation over canal irrigation	25-04-2024		
Diversion Head Works	Definition, object, general layout functions of different parts of diversion head works	27-04-2024		
	Types of Weir Difference between weir and barrage Functions and	01-05-2024		


	necessity of the following types: aqueduct super Passage,	01-05-2024		
Cross Drainage Works	level crossing inlet and outlet	02-05-2024		
	Sketches of the cross drainage works inlet and outlet	04-05-2024		
	Introduction Cross and head regulators	08-05-2024		
Regulatory works	Outlets	08-05-2024		
	Canal Escapes	09-05-2024		
	Falls			
	Control and river training Objective of river training			
River Training Works	Method of river training (Brief description)	15-05-2024		
	Method of river training (Brief description) Groynes Marginal	15-05-2024		
	embankment Pitched island Guide banks Definition Causes	16-05-2024		
Water Logging	Preventive & remedial measures	18-05-2024		
	Reclamation of water logged areas Well point system	22-05-2024		
	Doubt Session	22-05-2024		
	Doubt Session	25-05-2024		

Assignments

Assignment No	Contents of Syllabus Covered	Proposed Date	Actual Date	Remarks
A-1	Unit-1 ,2	17-02-2024		
A-2	Unit-3,4,5,6	18-04-2024		
A-3	Unit-7,8,9,10,11	25-05-2024		


House Test/Class Test

Name of test	Syllabus for Tests	Proposed Date	Actual Date	Remarks
Class Test -1	Unit-1 ,2	As per HPTSB Academic Schedule		
Class Test -2	Unit-3,4,5,6			
House Test -1	Unit-1, Unit-2 and Unit-3,4,5,6			


(Signature of Teacher)
Amish Reharia


(Signature of HOD)

Approved


Principal
Govt. Polytechnic for Women
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