PCI6I102- Irrigation Engineering (3-0-0)

LESSON PLAN

Semester- 6th

Branch/Course- Civil Engineering

Lecture No	Module	Topics to be delivered
1	1	Introduction
2		Techniques of water distribution in firms
3		Quality of irrigation water
4		Water requirements of Crops
5		Irrigation efficiencies
6		Soil moisture-irrigation relationship
7	2	Design of stable channels using Kennedy's and Lacey's theory
8		Lining of Irrigation Canals, economics of lining
9		Design of lined canals
10		Surprise test-1
11	3	Reclamation of Water Logged and Saline Soils
12		Surface and Sub-surface drainage
13		Types of Cross-Drainage Works
14		Design consideration for CD works
15		Diversion Head works
16		Layout of a diversion head works
17		Introduction to different components of a diversion head works.
18		Design of weir using Bligh's theory
19		Lane's weighted creep theory
20		Khosla's theory
21		Khosla's method of independent variables
22		Canal Falls: Types, Design and detailing of one type of fall
23	4	Gravity Dams: Typical cross section, Various forces acting on gravity dam
24		Combination of forces for design, Modes of failure and criteria for structural stability
25		High and low gravity dam, Design of high dam, Typical section of low gravity dam
26		Earth Dams: Types, Causes of failure
27		Preliminary section of an earth dam
28		Seepage control in earth dams
29		Spillways: Descriptive study of various types of spillways
30		Surprise Test-2

COURSE OUTCOME

Course Outcome	Descriptions (Students will be able to)
CO1	Plan an Irrigation System
CO2	Design irrigation canals and canal network
CO3	Plan and design diversion head works
CO4	Design irrigation cross-drainage works and canal falls.
CO5	Analyze gravity, earthen dam and spillways