DESIGN & DRAWING OF IRRIGATION STRUCTURES

(SYLLABUS)

Course Code	23CE4701C	Year	IV	Semester	I
Course Category	Professional Elective - IV	Branch	CIVIL	Course Type	Theory/ Practical
Credits	3	L-T-P	3-0-0	Prerequisites	
Continuous Internal Evaluation	30	Semester End Evaluation	70	Total Marks:	100

Course Objectives:

The objective of this course is to:

1. The course is designed to make the students learn the hydraulic design principles of irrigation structures.

Course Outcomes:

Course will enable the student to:

1. At the end of the course the student will be able to understand, design and draw hydraulic structures of Surplus weir, Tank sluice with a tower head, Canal drop- Notch type, Canal regulator, Syphon aqueduct type III

CO	Statement	Blooms level
CO 1	Design and prepare drawing of surplus weir using hydraulic design principles.	**L6**
CO 2	Design and draft tank sluice with tower head considering structural and hydraulic requirements.	**L6**
CO 3	Analyze and design canal drop (notch type) for energy dissipation and flow control.	**L4**
CO 4	Design canal regulator and prepare detailed engineering drawing.	**L6**
CO 5	Design and draw syphon aqueduct (Type III) integrating hydraulic and structural considerations.	**L6**

Course Articulation Matrix:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2
CO1	3	2	3	-	2	-	-	-	1	-	-	3	2
CO2	3	2	3	-	2	-	-	-	1	-	-	3	2
CO3	3	3	2	2	2	-	-	-	1	-	-	3	2
CO4	3	2	3	1	2	-	-	-	2	1	-	3	3
CO5	3	3	3	2	3	-	-	-	2	1	-	3	3

Syllabus

Unit No	Content	Mapped COs
I	Design and drawing of Surplus weir	CO1
II	Design and drawing of Tank sluice with a tower head	CO2
III	Design and drawing of Canal drop-Notch type	CO3
IV	Design and drawing of Canal regulator	CO4
V	Design and drawing of Syphon aqueduct type III	CO5

Learning Resource(s)

Text Book(s)

1. Water Resources Engineering – Principles and Practice by C. Satyanarayana Murthy, New age International Publishers.

Reference Book(s)

1. Irrigation Engineering and Hydraulic Structures by S.K. Garg, Standard Book House.
2. Irrigation and Water Power Engineering by B.C Punmia & Lal, Lakshmi Publications pvt. Ltd., New