

DESIGN AND DRAWING OF HYDRAULIC STRUCTURES

Lectures / Tutorials : 4 Periods/Week
Semester End Exam. : 3 Hours

Sessional marks : 40
Semester End Exam. marks : 60
Credits : 4

Course Objectives:

- The main objective of the course is to study the theory, design and drawing of the following irrigation structures:
 1. Irrigation canal
 2. Notch type canal drop
 3. Canal regulator
 4. Vertical drop weir on permeable foundations
 5. Direct sluice
 6. Surplus weir of a tank
 7. Type III Aqueduct and
 8. Ogee spillway profile

Course Outcomes:

At the end of the course the student will be able to Design and draw the following irrigation structures with the given data:

1. Irrigation canal
2. Notch type canal drop
3. Canal regulator
4. Vertical drop weir on permeable foundations
5. Direct sluice
6. Surplus weir of a tank
7. Type III Aqueduct and
8. Ogee spillway profile

Design and Drawing of the Following

UNIT – I

1. Irrigation canal.
2. Canal drop – Notch type.
3. Cross regulator.
4. Vertical drop weir on permeable foundations.

UNIT – II

5. Direct sluice.
6. Surplus weir of a tank.
7. Syphon Aqueduct (Type – III).
8. Profile of a Ogee spillway.

NOTE

Only elevation and section of structures need to be drawn.

Two questions of 30 marks each will be given from each unit out of which one is to be answered.

TEXT BOOK

1. Water Resources Engineering - Principles and Practice by C. Satyanarayana Murthy; New age international publishers, New Delhi, 2003.

REFERENCE BOOKS

1. Irrigation and Water Power Engineering by B.C.Punmia and Pande B.B. Lal, 16th Edition, Laxmi Publications, New Delhi,2009.
2. Irrigation Engineering and Hydraulic Structures by S.K. Garg, Khanna Publishers,2011.