

**4/4 B.Tech. SEVENTH SEMESTER**

**CE7T4E DESIGN AND DRAWING OF HYDRAULIC STRUCTURES Credits: 3**  
**Lecture: 1 periods/week Internal assessment: 30 marks**  
**Drawing: 3 period /week Semester end examination: 70 marks**

**Pre-requisites:** Water resources engineering, design and drawing of concrete structures, Geo-Technology

**Learning objectives:**

- To know the importance, location, components and types of irrigation structures
- To design various irrigation structures
- To get experience in drawing of irrigation structures.

**Course outcomes:**

At the end of course the student will have:

1. Capability for design and drawing of tank sluice and surplus weir.
2. Ability to design and drawing of canal regulator, fall and cross drainage structure.

**LIST OF STRUCTURES:**

1. Tank sluice with tower head
2. Surplus weir.
3. Canal regulator.
4. Trapezoidal notch fall.
5. Type III Syphon aqueduct.

**Final Examination pattern:** Any two questions of the above six designs may be asked out of which the candidate has to answer one question. The duration of examination will be three hours.

**Learning resources:**

**Text books:**

1. Design of minor irrigation and canal structures, (3<sup>rd</sup> edition) by Satyanarayana Murthy C., Wiley eastern Ltd, 1990.
2. Irrigation engineering and Hydraulic structures, (1<sup>st</sup> edition) by Garg S.K., Standard Book House, 2006.

**e-learning resources:**

<http://nptel.ac.in/courses.php>

<http://jntuk-coerd.in/>