8CE168 Bridge Engineering

L-T-P-Cr: 3-0-0-3

Objective: The objective of the course is to make the students learn basics and design of bridges and to make them aware of the codal provisions of bridges design.

Theory: 1. Brief historical review, Different types of Bridges and span range, Bridge codes. 8 Lectures

 2. Bridge super structures ,Reinforced concrete slab bridge decks, Tee beam and slab deck, box culverts 10 Lectures

3. Load distribution in different girders – Courbon’s method, Morice-Little method. 8 Lectures

4. Box girder bridges - finite element and finite strip analyses, finite difference analysis of deck slab, 8 Lectures

 5. Grillage analysis. Cable stayed and suspension bridges; Bridge construction; Bridge

maintenance. 8 Lectures

 Texts/Reference Books: 1. Bridge Engineering, Victor et. al., TMH. 2. Pre stressed Concrete Bridges by N Krishna Raju CBS Pub 3. Design and Construction of Highway Bridges by K S Rakshit, Central Publication