

CHRISTU JYOTI INSTITUTE OF TECHNOLOGY & SCIENCE
CIVIL ENGINEERING DEPARTMENT
LESSON PLAN

Academic Year : 2018-2019
 Name of the Faculty : p shivashanker
 Name of the subject : Prestressed concrete structures
 Number of periods/week : 05 Theory : 05

Year and sem: IV-II
 Designation : Assistant professor
 Subject code:
 Special Remedial classes : 0

UNIT	NAME OF THE TOPIC AS PER JNTUH LATEST SYLLABUS	TEXT /REFERENCE BOOKS/JOURNALS	NO. OF CLASSES PLANNED	MODE OF TEACHING	SYLLABUS TO BE COMPLETED BY DATE
I	INTRODUCTION. Historic development	T1, T2	1	BB	24/12/2018
	General principles of Pre-stressing pre tensioning and post tensioning		2	BB	24/12/2018
	Advantages and limitations of pre-stressed concrete		1	BB	31/12/2018
	General principles of PSC		1	BB	01/01/2019
	Classification of pre-stressing		2	BB	01/01/2019
	Types of pre-stressing		2	BB	07/01/2019
	High strength concrete and characteristics		2	BB	08/01/2019
	High tensile steel and characteristics		1	BB	09/01/2019
	METHODS AND SYSTEMS OF PRE-STRESSING Pre-tensioning and post-tensioning		1	BB	16/01/2019
	Hoyer system		2	BB	21/01/2019
	Magnel Blaton system		1	BB	22/01/2019
	Freyssinet system		2	BB	23/01/2019
	Gifford-Udall system		2	BB	28/01/2019
	Lee McCall system		1	BB	29/01/2019
II	LOSSES OF PRESTRESS loss of pre-stress in pre-tensioned members due to elastic shortage of concrete	T1, T2	2	BB	30/01/2019
	due to shrinkage of concrete		1	BB	04/02/2019
	due to creep of concrete		1	BB	04/02/2019
	loss of pre-stress in post tensioned members due to elastic shortage of concrete		2	BB	05/02/2019
	due to shrinkage of concrete		1	BB	06/02/2019
	due to creep of concrete		1	BB	11/02/2019
	relaxation of stress in steel		1	BB	11/02/2019
	slip in anchorage frictional losses		2	BB	12/02/2019
III	FLEXURE Analysis of sections for flexure	T1, T2	2	BB	13/02/2019
	Beams pre-stressed with straight, concentric eccentric, bent and parabolic tendons		2		25/02/2019
	stress diagram-elastic design of PSC beams of rectangular and I-sections		2		26/02/2019
	kern line-cable profile and cable layout		2		27/02/2019
	SHEAR: general considerations,		1		05/03/2019

	principal tension and compression improving shear resistance of concrete by horizontal pre-stressing vertical pre-stressing by using inclined and parabolic cables analysis of rectangle and I-beams for shear design of shear reinforcement BIS code provisions		2 2 1 2 1 2		06/03/2019 11/03/2019 12/03/2019 13/03/2019 18/03/2019 18/03/2019
IV	TRANSFER OF PRESTRESS IN PRETENSION MEMBERS Transmission of pre-stressing force by bond-transmission length	T1, T2	1	BB	19/03/2019
	Flexure bond stress		1	BB	20/03/2019
	IS code provisions		1	BB	25/03/2019
	Anchorage zones stresses in post tensioned members		1	BB	25/03/2019
	Stress distribution in end block		1	BB	26/03/2019
	Analysis by Guyon magnel method		1	BB	26/03/2019
	By zielinski method and		1	BB	27/03/2019
	By Rowes method		1	BB	01/04/2019
	Anchorage zone reinforcement		1	BB	01/04/2019
	BIS provisions		1	BB	02/04/2019
V	COMPOSITE BEAMS different types	T1, T2	1	BB	02/04/2019
	propped and unsupported		1	BB	03/04/2019
	stress distribution		1	BB	08/04/2019
	differential shrinkage		1	BB	08/04/2019
	analysis of composite beams		1	BB	09/04/2019
	general design considerations		1	BB	09/04/2019
	DEFLECTION importance of control of deflections		1	BB	10/04/2019
	factor influencing deflections		1	BB	15/04/2019
	short term deflections of un-cracked beam		1	BB	16/04/2019
	prediction of long time deflection BIS code requirements		1	BB	17/04/2019

Total no. of Classes planned = 71

FACULTY

HOD

PRINCIPAL