TEACHING PLAN FOR THEORY

Subject Teacher: Mr. Shreekant Narayankar

Subject: Advance Concrete Technology Elective III Class: B.E.(A) Branch: Civil Year 2017-2018

Lecture No	Scheduled Date	Topics to be covered on the scheduled date
		UNIT 1
1	19-6-2017	Cement and its types: general, hydration of cement
2	20-6-2017	Alkali aggregate reaction
3	23-6-2017	Grading curves of aggregates,
4	26-6-2017	Manufactured sand as fine aggregate, copper slag as fine aggregate
5	27-6-2017	Concrete: properties of concrete, w/b ratio, gel space ratio,
6	30-6-2017	Problems on maturity concept, aggregate cement bond strength, Green concrete ,
7	3-7-2017	Guidelines for Quality control & Quality assurance of concrete, Effect of admixtures.
		UNIT II
8	4-7-2017	Structural Light weight concrete
9	7-7-2017	Ultra light weight concrete, vacuum concrete,
10	10-7-2017	Mass concrete, waste material based concrete,
11	11-7-2017	Sulphur concrete and sulphur infiltrated concrete, Jet cement concrete (ultra rapid hardening),
12	14-7-2017	Gap graded concrete, high strength concrete
13	17-7-2017	High performance concrete ,
14	18-7-2017	Self-curing concrete, Pervious concrete.

UNIT III		
15	21-7-2017	Design of high strength concrete mixes,
16	1-8-2017	Design of light weight aggregate concrete mixes,
17	4-8-2017	Design of flyash cement concrete mixes, design of high density concrete mixes,
18	7-8-2017	Design of pump able concrete mixes, Design of self-compacting concrete.
19	8-8-2017	Advanced non-destructive testing methods: ground penetration radar, probe penetration, break off maturity method,
20	11-8-2017	stress wave propagation method, electrical/magnetic methods
21	14-8-2017	Nuclear methods and infrared thermographs**.**
UNIT IV		
22	15-8-2017	Historical development of fibre reinforced concrete,
23	18-8-2017	properties of metallic fibre, polymeric fibres,
24	21-8-2017	carbon fibres, glass fibres and naturally occurring fibres
25	22-8-2017	. Interaction between fibres and matrix (uncracked and cracked matrix),
26	25-8-2017	Basic concepts and mechanical properties: tension and bending.
27	28-8-2017	Basic concepts and mechanical properties: tension and bending.
28	29-8-2017	Interaction between fibres and matrix (uncracked and cracked matrix),
UNIT V		
29	1-9-2017	Properties of hardened
30	4-9-2017	behaviour under compression,
31	5-9-2017	frc, tension and flexure of steel fibres and polymeric fibres,

32	8-9-2017	GFRC, SFRC, SIFCON,-development,
33	11-9-2017	constituent materials, casting,
34	12-9-2017	Quality control tests and physical properties.
Unit VI		
35	15-9-2017	Ferro cement: Properties & specifications of Ferro cement materials.
36	18-9-2017	Ferro cement: Properties & specifications of Ferro cement materials
37	19-9-2017	analysis and design of prefabricated concrete structural elements
38	22-9-2017	manufacturing process of industrial concrete elements
39	25-9-2017	manufacturing process of industrial concrete elements
40	26-9-2017	precast construction,
41	29-9-2017	erection and assembly techniques
42	2-10-2017	erection and assembly techniques