LESSON PLAN (R&M)

Name of faculty DHEERAJ GROVER
Discipline Civil Engineering
Semester 5th
Subject R&M
Work Load:-L- 03 P-nil

Week	Theory	
	Lecture Day	Topic
1st	1st	Introduction
	2nd	Importance and significance of repair and maintenance of buildings
	3rd	Meaning of maintenance Objectives of maintenance
2nd	1st	Factors influencing the repair and maintenance
	2nd	Definition of deterioration/decay Factors causing deterioration
	3rd	Human factors causing deterioration Chemical factors causing deterioration
3rd	1st	Environmental conditions causing deterioration Miscellaneous factors
	2nd	Effects of various agencies of deterioration on various building materials bricks, timber
4th	1st	concrete, paints, metals, plastics, stones
	2nd	Systematic approach/procedure of investigation,diagnosis of defects
	3rd	**REVISION/DISCUSSION**
5th	1st	List non-destructive and others tests on structural elements and materials
	2nd	Define defects in buildings Classification of defects
	3rd	Main causes of building defects in various building elements Foundations,basements and DPC
6th	1st	Walls,Column and Beams Roof and Terraces
	2nd	Joinery,Decorative and protective finishes
	3rd	Services,Defects caused by dampness
7th	1st	Compatibility aspects of repair materials
	2nd	State application of following materials in repairs: Anti corrosion coatings
	3rd	Adhesives/bonding aids,Repair mortars
8th	1st	Curing compounds,Joints sealants,Waterproofing systems for roofs
	2nd	Protective coatings,Preventive maintenance considerations,Surface preparation techniques
	3rd	**REVISION/DISCUSSION**
9th	1st	Epoxy injection,Grooving and sealing
	2nd	Stitching,Adding reinforcement and grouting
	3rd	Flexible sealing by sealant,Bug holes,Form tie holes
10th	1st	Honey comb and larger voids,Steps in repairing
	2nd	Prevention of corrosion in reinforcement
	3rd	gunite techniques,Open top placement,Pouring from the top to repair bottom face
11th	1st	Birds mouth,Dry packing,Form and pump
	2nd	Preplaced – aggregate concrete,Trowel applied method
	3rd	Repair of DPC against Rising Dampness, Physical methods
12th	1st	Electrical methods,Chemical methods
	2nd	Repair of mortar joints against leakage,Efflorescence removal
	3rd	Water proofing of wet areas,Water proofing of flat RCC roofs
13th	1st	Various water proofing systems and their characteristics
	2nd	Types of sealing joints with different types of sealants
	3rd	Techniques for repair of joints,Repair of overhead and underground water tanks
14th	1st	Revision of chapter 1
	2nd	chapter 2
	3rd	chapter 3
15th	1st	chapter 4
	2nd	chapter 5
	3rd	chapter 6