SHIVAJIRAO KADAM INSTITUTE OF TECHNOLOGY & MANAGEMENT, Indore	
Lecture Plan	
Session :	
Subject: Basic Civil Engineering & Mechanics	**Subject Code**: BT-204
Subject Teacher: Girish Patidar	**Department**: Civil Engineering

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Max. available
No of Periods							

LECTURE PLAN:

Sr.No	Contents	**Reference**	Date Planned	Date of completion	**Ref. Notes** Page No
1.	**Unit I** : Stones- types, properties, test & uses				
2.	Bricks-types, properties, test & uses				
3.	Cement-types, properties, test & uses				
4.	Lime -types, properties, test & uses				
5.	Timber-types, properties, test & uses				
6.	Workability, strength properties of concrete				
7.	Nominal proportion of concrete preparation of concrete, compaction, curing				
8.	Elements of building construction, foundations conventional spread footings, RCC footings				
9.	Brick masonry walls, plastering and pointing,				
10.	Floors, roofs				
11.	Doors, windows				
12.	Lintels & staircases – types and their suitability				
13.	**Unit II** :Introduction to surveying instruments – levels, thedolites				
14.	Plane tables and related devices.				
15.	Electronic surveying instruments				
16.	Measurement of distances – conventional and EDM methods				
17.	Measurement of directions by different methods				
18.	Measurement of elevations by different methods				
19.	Reciprocal leveling				
20.	**Unit III** : Mapping details and contouring				
21.	Profile Cross sectioning and measurement of areas				
22.	Measurement of volumes				
23.	Application of measurements in quantity computations				
24.	Survey stations				
25.	Introduction of remote sensing and its applications				
26.	**Unit IV**: Forces and Equilibrium:Brief introduction of Applied Mechanics				
27.	Graphical and Analytical Treatment of Concurrent and non concurrent Co- planner forces				
28.	Parallelogram of forces,free body Diagram				
29.	Concept of equilibrium ,Lami's theorem with Numericals				
30.	Force Diagram and Bow's notations				

31.	Numerical on equilibrium				
32.	Application of Equilibrium Concepts				
33.	Analysis of plane Trusses: Classification, Assumptions				
34.	Analysis of plane Trusses by method of joints				
35.	Numerical on method of joints				
36.	Analysis of plane Trusses by method of sections				
37.	Numerical on method of sections				
38.	Frictional force in equilibrium				
39.	Frictional force in equilibrium problems				
40.	**Unit V** : Centre of Gravity and moment of Inertia : Introduction and applications				
41.	Centroid and Centre of Gravity				
42.	Numericals on Centroid and Centre of Gravity				
43.	Moment Inertia of Area and Mass				
44.	Radius of Gyration				
45.	Theorems of moment of inertia				
46.	Moment of inertia for different figures like triangle,rectangle,circle etc.				
47.	Numericals on Moment Inertia of Area and Mass				
48.	Numericals on Moment Inertia of Area and Mass				
49.	Introduction to product of Inertia and Principle Axes				
50.	Support Reactions				
51.	Shear force and bending moment : Introduction				
52.	SFD for Cantilever with concentrated, distributed load and Couple				
53.					
54.	SFD for SSB with concentrated, distributed load and Couple				
55.					
56.					

Reference

1. Punmia, B.C., Building Construction
2. M.L.Gambhir, Building And Construction Materials
3. Dr.R.K.Bansal, Basic Civil Engineering & Engg. Mechanics
4. Punmia, B.C.,Basic Civil Engineering
5. S.Ramamrutham, Basic Civil Engineering & Engg. Mechanics

Prepared By :	**Approved By :Hod**
Sign	**Sign**