

Samrat Ashok Technological Institute, Vidisha (M.P.)
LECTURE PLAN

Department	Civil Engineering	Session :	2023-2024
Name of Teacher	Dr. Bablu Kirar	Semester	III
Subject	Concrete Technology	Sub. Code	CEC204

TIME SCHEDULE: Total expected periods: **40 (40 hours)**

Day	Mon	Tue	Thu				Max. available
No. of Periods	1(V)	1(V)	1(V)				03
S.No.	Topics to be covered					Lecture No.	Remarks (Reference Pages from Books / Dates)
UNIT-I_ Concrete Making Materials (09)							
1	Introduction to Concrete, Grade of concrete, advantage & disadvantages of concrete					1	
2	Ingredients of Concrete					1	
3	Introduction to Cement, Classification of cement					1	
4	Properties of cement					1	
5	Chemical composition and it's Properties and Test on cement					1	
6	Aggregates and Tests on Aggregates					1	
7	Bulking of sand, Sieve analysis – Grading					1	
8	Chemical Admixtures					1	
9	Numerical Practice on Chemical composition of cement					1	
UNIT-II_ Properties of Fresh and Hardened Concrete (08)							
10	Properties of Fresh Concrete					1	
11	Properties of Hardened Concrete					1	
12	Factors affecting of Concrete properties					1	
13	Testing of Concrete					1	
14	Different tests of workability- Factors influencing workability					1	
15	Stress and Strain Characteristics of concrete					1	
16	Compressive and Tensile Strength of Concrete					1	
17	Relationship between different strengths – factors influencing strength					1	

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UNIT-III_ Design of Concrete Mix (9)

18	Methods of concrete mix design	1	
19	IS Code method	1	
20	IS Code method (continue)	1	
21	Factors influencing the choice of mix design	1	
22	Acceptance criteria for concrete	1	
23	Concrete mixes with Surkhi and other Pozzolanic materials	1	
24	Numerical Practice	1	
25	Numerical Practice	1	
26	Numerical Practice	1	

UNIT-IV_ Production and Quality Control of Concrete (7)

27	Production of crushed stone aggregate	1	
28	Batching equipment's for production of concrete	1	
29	Batching equipment's for concreting	1	
30	Concreting under water, hot and cold weather conditions	1	
31	Statistical quality control and field control	1	
32	Non-destructive testing of concrete	1	
33	Inspection and Testing of concrete	1	

UNIT-V_ Special Concrete (7)

34	Light weight concrete	1	
35	Ready mix concrete	1	
36	Ferrocement and Fiber reinforced concrete	1	
37	Polymer concrete composites, Shotcrete, Guniting	1	
38	Prestressed concrete and Under water concrete	1	
39	Mass concrete	1	
40	Heat resistant concrete	1	