

SHANTILAL SHAH ENGINEERING COLLEGE, BHAVNAGAR

B.E. SEM. – IV : Concrete Technology (2140608)

Following Students have to submit their Active Learning Assignment (PPT) on given Topic and submit on 15th March 2018.

Note:

- ❖ First Slide should contain College name, Topic title, and Enrollment numbers.
- ❖ Make at least 10-15 slides on topic

Roll No.	Topic Title
1001-1005	Introduction of concrete, Historic development, Composition of concrete
1006-1010	Advantages of concrete over other materials, Advances and future trends in concrete, Overview of Sustainability and Concrete development
1011-1015	Cement: Chemical composition, Hydration of cement, structure of hydrated cement
1016-1020	Tests on cement And water chemical admixtures
1021-1025	Aggregates: Classification, IS specifications, Properties, Grading, Methods of combining aggregates, specified gradings, Testing of aggregates
1026-1030	Water – General requirements & limiting values of impurities
1031-1035	Fresh Concrete: Properties of fresh concrete, Definition and Measurement methods of workability as per IS and ASTM standards
1036-1040	factors affecting workability, Segregation & Bleeding, Slump loss, Re-tempering,
1041-1045	Site preparations for concreting, Mixing, Conveying, Placing, Compaction, Finishing of concrete. Curing & various
1046-1050	Hardened Concrete: Strengths of hardened concrete
1051-1055	standard test methods as per IS and ASTM, Failure mechanism under compression & tension
1056-1060	Stress-strain behaviour of concrete, Overview of Modulus of elasticity, Dimensional stability –Creep & Shrinkage
1061-1065	Durability & Permeability of concrete: Causes of deterioration in concrete and durability problems
1066-1070	Factors affecting durability, Transport mechanism of gases & fluids in concrete, Cracking & causes of cracking
1071-1075	Carbonation induced & corrosion induced cracking, Alkali-aggregate reaction, Degradation by freeze & thaw, Sulphate attack, Durability under sea-water
1076-1080	Mix design of Concrete: Principles of concrete mix design, Parameters and factors influencing mix design,
1081-1085	Indian Standard methods of mix design
1086-1090	Acceptability criteria, variability of results, Various provisions of IS code for sound concrete.
1091-1095	Special concrete and Concreting methods: advanced cement based composites, Fibre reinforced concrete
1096-1000	Polymer modified concrete, Self-compacting concrete
1101-1105	Light weight concrete, High strength concrete

1106-1110	Light-weight & heavy weight concrete, High volume fly ash concrete.
1106-1110	Special concreting methods: Pumped concrete, Ready mix concrete, Under-water concreting
1111-1115	Hot & cold weather concreting, Precast concrete
1116-1120	Miscellaneous Topics: Non-Destructive testing of concrete – Introduction to Destructive, semi-destructive & Non-destructive testing methodology
1121-1125	Problems faced during Non-destructive evaluation
1126-1130	Test methods like Rebound Hammer test, Ultra-sonic pulse velocity
1131-Rest All	Penetration tests, Pull out tests

Faculty : Prof. P. S. Parekh