

ST5211 ADVANCED STRUCTURAL ENGINEERING LABORATORY

DETAILED SYLLABUS

LIST OF EXPERIMENTS

1. Fabrication, casting and testing of simply supported reinforced concrete beam for strength and deflection behaviour.
2. Testing of simply supported steel beam for strength and deflection behaviour.
3. Fabrication, casting and testing of reinforced concrete column subjected to concentric and eccentric loading.
4. Dynamic Response of cantilever steel beam
 - a. To determine the damping coefficients from free vibrations.
 - b. To evaluate the mode shapes.
5. Static cyclic testing of single bay two storied steel frames and evaluate
 - a. Drift of the frame.
 - b. Stiffness of the frame.
 - c. Energy dissipation capacity of the frame.
6. Non-Destructive Test on concrete
 - i. Rebound hammer and ii) Ultrasonic Pulse Velocity Tester.

LIST OF EQUIPMENTS

1. Strong Floor
2. Loading Frame
3. Hydraulic Jack
4. Load Cell
5. Proving Ring
6. Demec Gauge
7. Electrical Strain Gauge with indicator
8. Rebound Hammer
9. Ultrasonic Pulse Velocity Tester
10. Dial Gauges
11. Clinometer
12. Vibration Exciter
13. Vibration Meter
14. FFT Analyser

Diploma, Anna University-UG, PG., HSC & SSLC

Notes

Syllabus

Question Papers

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REFERENCES

Dally J W, and Riley W F, "Experimental Stress Analysis", McGraw-Hill Inc. New York, 1991.