CIVIL ENGINEERING

SEMESTER- VII

SUBJECT NAME – GEOTECHNICAL ENGG.

SUBJECT CODE – CE701

LIST OF EXPERIMENTS:

1. Determination of water content by Oven drying method.
2. Determination of water content by Pycnometer
3. Determination of soil field density by core cutter method
4. Determination of soil field density by sand replacement method
5. Determination of Specific Gravity By Pycnometer.
6. Determination of Consistency Limits (i) Liquid Limit (ii) Plastic Limit (iii) Shrinkage Limit
7. Determination of liquid limit of soil by cone penetrometer.
8. Grain size analysis by sieve shaking method
9. Grain size analysis of fine grained soil by sedimentation using (i)pipette (ii) hydrometer.
10. Determination of coefficient of permeability of soil by- (a) constant head method (b) variable head method.
11. Determination of compaction parameters by- (a) light compaction, (b) heavy compaction.
12. Direct Shear test.
13. Triaxial Test
14. Unconfined Compression Strength Test.

CIVIL ENGINEERING

SEMESTER- VII

SUBJECT NAME – PRESTRESSED CONCRETE STRUCTURES LAB

SUBJECT CODE – CE704

LIST OF EXPERIMENTS:

1. Fabrication, casting and testing of simply supported prestressed concrete beam/slab (pres-tensioned or post-tensioned) for strength and deflection behaviour.

2. Fabrication, casting and testing of beam/slab (pres-tensioned or post-tensioned) with different layout of cables for strength and deflection behaviour

3. Fabrication, casting and testing of various prestressed structures as per contents given in the syllabus

4. Minimum 15 problems from above topics along with cross checking using any opensource / professional software.

5. Modeling and analysis of at least one real-life structure using open-source/

professional software

CIVIL ENGINEERING

SEMESTER- VII

SUBJECT NAME – IOT LAB

SUBJECT CODE – CE705

LIST OF EXPERIMENTS:

LAB INDEX Design, Developed and implement following using Arduino, Raspberry Pi compiler

And Python language in Linux/Windows environment.

1. Study and Install IDE of Arduino and different types of Arduino.
2. Write program using Arduino IDE for Blink LED.
3. Write Program for RGB LED using Arduino.
4. Study the Temperature sensor and Write Program foe monitor temperature using Arduino.
5. Study and Implement RFID, NFC using Arduino.
6. Study and Configure Raspberry Pi.
7. WAP for LED blink using Raspberry Pi.
8. Study and Implement Zigbee Protocol using Arduino / Raspberry Pi.
9. Study and implement MQTT protocol using Arduino.
10. Study and implement CoAP protocol using Arduino.