

# GUJARAT TECHNOLOGICAL UNIVERSITY

## B.E. SEMESTER : VIII

### CIVIL ENGINEERING

Subject Name: **PROJECT-II**

**L-0, T-0, P-8**

Student has to choose any one topic from following civil engineering area. Student can carry out field project/computational project / experimental project/simulation project under the guidance of faculty members. Student has to work for selected topic and at the end of semester project report should be prepared for submission. The examination will be in form of presentation of work.

Sr. No.	Area	Suggestive list of topics
1	Software and Computer Applications	Computer applications in Civil and Structural engineering-ANN, GIS, GPS and its application for real life problems, Civil and Structural engineering applications using MATLAB, Application of software in Civil Engineering: Building planning, Mapping, Road, Stormwater, Water supply, Sewerage design etc.
2	Transportation Infrastructure projects	Railways, Airport, Bridges, Docks, Harbour, Ports, Expressways, Bus Rapid Transit System (BRTS), Metro Rail, Intelligent Transport Systems.
3	Construction works/ Construction Management	Trenchless technology, Under water construction, Heavy Civil engineering and Erection works. Construction management
4	Fluid Mechanics, Hydrology & Water Resources Engineering and Management Irrigation engineering, and Hydraulic Structures	Computational Fluid dynamics, Hydraulic machines and systems. Hydrological studies, Impact of Climate change on Water Resources, Water resources problems in Arid and Semi-arid regions, Watershed development and Management, Sea water intrusion, Irrigation water use, Irrigation Technology and Irrigation water Management, Municipal and Industrial water use, Water Harvesting and Conservation, Storage Structures, Diversion structures, Conveyance Structures etc.
5	Environmental Engineering Projects	Water and sewage treatment plant, Air pollution and control, Marine pollution, logistic management of solid waste, E-waste disposal, Environmental Impact Assessment
6	Geotechnical Engineering Projects	Soil liquefaction, Pile foundation, Improvement of bearing capacity of sandy soil by grouting, Ground improvement techniques, Use of plastics as soil stabilizer, erosion control in slope.
7	Structural Analysis and Design	Civil Engineering structures