

### Structural designs

- i) Multistoried building designs
- ii) Design checks
- iii) Concrete mix designs

### **AVAILABLE MAJOR EQUIPMENT**

Accelerated curing tank  
 Benkelman Beam Apparatus  
 Bitumen extractor  
 Computerized 100T UTM  
 Computerized 200T ACTM  
 Digital planimeter  
 Digital Rebound hammer  
 Direct shear test setup  
 Dynamic Cone Penetration Test setup  
 Electronic Distance meter  
 Field & Lab CBR test  
 Merlin Cycle  
 Plate bearing test set up  
 Road Roughometer  
 Standard Penetration test setup  
 Total Station (1" accuracy)  
 Tri-axial test setup  
 Unconfined compression test setup  
 Plotter for Longitudinal and sectional Drawings of  
 A<sub>0</sub>, A<sub>1</sub>, A<sub>2</sub> sizes

### **AVAILABLE SOFTWARE**

Auto Cad  
 STAAD Pro  
 STRUDS  
 Elevated Service Reservoir design (ESR)  
 Ground Service Reservoir design (GSR)  
 QE Pro  
 ARC GIS  
 Map-Info

### **CONSULTANCY SERVICES OFFERED TO THE VARIOUS SECTORS**

Department has been offering consultancy services in various areas of Civil Engineering works, to several clients such as various private organizations in and around Rajam, Government sectors such as CPWD, RWS&S, R&B etc.

In addition to the above we offer, facility creation for conducting labs, Project works (B.Tech, M.Tech, Ph.D requirements) for students/ faculty of engineering colleges.

### **ACTIVE MEMBERS INVOLVED**

Dr. V. Ramakrishna, Professor  
 Dr. G. Venkata Rao, Professor  
 Sri V. K. Chakravarthy, Assoc. Prof  
 Sri U. Arun Kumar, Assoc. Prof  
 Sri J. Venkateswara Rao, Assoc. Prof  
 Sri. SSG Prasad, Asst. prof  
 Sri K S B Prasad, Asst. prof  
 Sri K Gopi Sankar, Asst. prof  
 Sri R. Srinivasa Rao, Asst. prof  
 Sri B. Harish, Asst. prof

### **FOR FURTHER DETAILS CONTACT**

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## **CONSULTANCY ACTIVITIES**



Survey



Soil Testing



Concrete and Steel Highway Quality

**DEPARTMENT OF CIVIL ENGINEERING**  
**GMR INSTITUTE OF TECHNOLOGY**  
 GMR Nagar, Rajam – 532 127  
 Srikakulam (Dist.)  
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### ABOUT GMRIT

Established in the year 1997 under the aegis of GMR Varalakshmi Foundation, GMR Institute of Technology is a self-financing Autonomous Engineering college approved by the All India Council for Technical Education (AICTE) The Institute is accredited by NAAC with 'A' grade all UG programs are accredited by NBA-AICTE and an ISO 9001-2008 certified Institution affiliated to Jawaharlal Nehru Technological University, Kakinada. GMRIT is located in Rajam, in the district of Srikakulam of Andhra Pradesh. It provides its learning community state-of-the-art facilities, infrastructure and a competent faculty.

### CIVIL ENGINEERING DEPARTMENT

The Civil Engineering Department of GMRIT was established in 2002. The department is accredited by NBA New Delhi. The department is currently offering B.Tech in Civil engineering and M.Tech in Transportation Engineering. The Civil Engineering Department has the state of art infrastructure with well equipped labs, computer center spread in an area of 953 m<sup>2</sup>. They are supported by experienced and qualified faculty. The laboratory facilities are available in all subject areas of Civil Engineering such as

Engineering Geology, Environmental Engineering, Computer aided analysis and design, surveying, Geo-Technical Engineering, concrete and Highway Engineering, Strength of Materials, Fluid Mechanics and Hydraulics Machinery. The Department is equipped with software such as Map info, STAAD-pro, STRUDS, and Arc-GIS. In addition to the regular curriculum, the department is offering add on courses, audit courses for enriching the practical knowledge of the students and preparing them for better employability. Students were also engaged in the projects works which demands the needs of social body in the surrounding situations as well as in the research projects.

### CONSULTANCY SERVICES OFFERED

The department has been offering consultancy services in all the Civil Engineering domain areas. The department has initiated a working group titled "Quality Control and Quantity Estimation" to interlink the various labs and specializations available in the curriculum. The following are some of the details of services that have been offered so far.

#### Survey Field work:

- i) Different types of surveys, plotting, and leveling.
- ii) Area calculations
- iii) Angle measurements

#### Geo-technical and Geological Investigations:

- i) Index properties
- ii) Engineering properties.
- iii) Safe bearing capacity
- iv) Ground water Exploration

#### Tests on various Materials:

##### Tests on Bricks:

- i) Water absorption test
- ii) Compressive strength

#### Tests on Tiles:

- i) Water absorption test
- ii) Dimension check test

#### Tests on Cement:

- i) Consistency, Fineness
- ii) Setting times, Soundness
- iii) Compressive strength test

#### Tests on Sand:

- i) Sieve analysis
- ii) Specific gravity
- iii) Bulking of sand

#### Tests on Aggregates:

- i) Sieve analysis
- ii) Crushing value
- iii) Specific gravity
- iv) Water absorption
- v) Impact value
- vi) Abrasion value
- vii) Flakiness and Elongation index

#### Tests on Steel:

- i) Impact test
- ii) Hardness
- iii) Tensile strength
- iv) % Elongation
- v) Bend and rebend
- vi) Proof stress

#### Tests on Concrete:

- i) Compressive strength
- ii) Non-destructive testing
- iii) Workability tests

#### Tests on Water Quality:

- i) Water quality tests

#### Tests on Highway Materials:

- i) Penetration
- ii) Ductility
- iii) Viscosity
- iv) Softening Point
- v) Marshall stability
- vi) Bitumen extraction
- vi) Road unevenness