



# Geethanjali

College of Engineering & Technology

**UGC Autonomous Institution**

Accredited by NAAC, Approved by AICTE and affiliated to JNTU'H

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**DEPARTMENT OF CIVIL ENGINEERING**

## PRAGATHI

Volume 3, Issue 1, July – December 2018



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M. Tech.  
Chairman



Dr. Udaya Kumar Susarla  
M. E., Ph.D.  
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Dr. R. Prasanna Kumar  
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Professor & Head

I am very happy to bring out the second issue of Department Newsletter "PRAGATHI" in this year 2018. I am immensely happy to note the commendable efforts taken by our faculty members and the students to carry on the legacy of the spirit of enhancing leadership skills through active participation in the various academic activities all through a span of six months. At present, the department has 5 Professors, 3 Associate Professors and 16 Assistant Professors. I would like to congratulate all the members of editorial board for their sincere effort to release this edition of newsletter. I am looking forward for a more eventful semester ahead. Good luck to all our faculty and students.

## Vision of the Department

The Civil Engineering Department is committed to excellence, quality, and sustained growth while offering our students an outstanding and rigorous education in an environment that supports intellectual growth while meeting 21<sup>st</sup> century demands.

## Mission of the Department















1. To provide high-quality educational experience for students with strong emphasis on professional ethics, social and environmental responsibilities.
2. To provide infrastructure and facilities to meet the latest technological requirements.
3. To provide research opportunities for faculty and students.
4. To have a continuous interaction with industry with an emphasis on R&D.
5. To produce engineers capable of critical thinking, devoted to a lifelong learning, and highly sought after by employers.

## I PUBLICATIONS BY FACULTY

1. **Rajesh Kumar. Y.**, ‘Comparative Study of Base Isolators and Viscous Fluid Dampers on Seismic Response of RC Structures’, International Journal of Civil Engineering and Technology, ISSN (print): 0976-6308, ISSN (online): 0976-6316, Volume 9, Issue 8, August 2018., PP: 798-806.
2. **Kishore Babu. D.**, ‘Damage Assessment Curves for RC framed Structures Under Seismic Loads’ International Journal of Civil Engineering and Technology (IJCIET), ISSN Print: 0976-6308,ISSN(online): 0976-6316, Volume 9, Issue 8, August 2018, PP: 1769–1782.
3. **Ramachander. D.**, ‘Seismic Response of Indian Designed Five Storey Structure with World Earthquake Ground Motions’, Journal of Advance Research in Dynamical and Control Systems, ISSN (online): 1943-023X, Volume 07, Special Issue 13, December 2018., PP: 2475-2481.
4. **Supriya. P.**, ‘Seismic Response of Indian Designed Five Storey Structure with World Earthquake Ground Motions’, Journal of Advance Research in Dynamical and Control Systems, ISSN (print): 0676-6789, ISSN (online): 0676-6696, Volume 10, Special Issue December 2018., PP: 2475-2481.
5. **Rajesh Kumar. Y.**, ‘Effect of aluminum shear yielding dampers on seismic response of R C structures’, Journal of advanced research in dynamical and control systems, ISSN: 1943 -023X, Volume 10, Issue 6, May 2018, - PP: 107-116.

## II ACADEMIC TOPPERS

The students who topped the results of B. Tech. I -Semester during the academic year 2018-19 are given below.

	I-Year	II-Year	III-Year	IV-Year	
<b>I RANK</b>	 <b>G. SHRUTHI</b> 18R11A0119 CGPA- 9.58	 <b>A.VIJAY KUMAR</b> 17R11A0150 CGPA- 9.67	 <b>I. V. K. REVANTH NAIDU</b> 16R11A01B0 CGPA- 9.58	 <b>V. BINDU</b> 15R11A0145 76.0%	
<b>II RANK</b>	 <b>K. SHIVANI</b> 18R11A0127 CGPA- 9.42	 <b>R. KALYANI</b> 17R11A0136 CGPA- 9.17	 <b>B. KARTHIK</b> 17R15A0101 CGPA- 8.92	 <b>P. BHANU KUMAR REDDY</b> 15R11A0178 71.2%	 <b>K. LINGARAJU</b> 15R11A0120 71.2%
<b>III RANK</b>	 <b>CH. RAKESH</b> 18R11A0112 CGPA - 9.37	 <b>M.VIKAS</b> 17R11A0123 CGPA- 8.71	 <b>CH. RAMYA TEJA</b> 16R11A0157 CGPA- 8.83	 <b>K. MEGHANA SAI</b> 16R11A0147 CGPA- 8.83	 <b>CH. RACHANA</b> 15R11A0119 70.06%

## III STUDENT PARTICIPATION & ACHIEVEMENTS

- Narender. T.**, B. Tech III year student has participated in all India two day Seminar on “Recent Development in Concrete Composites (RDCC-2018)” Organized by Institute of Engineers ( IEI) at Vishvesvaraya Bhavan, Hyderabad during 24th to 25th August, 2018.
- Narender. T.**, B. Tech III year student has attended one day National workshop on “Disaster Management” at JNTU Hyderabad on 28th September, 2018.
- Narender. T.**, B. Tech III year student has participated in one day workshop on “ETABS Software” at CBIT on 29th September, 2018.
- Narender. T.**, B. Tech III year student has attended one day seminar on “Affordable housing for all” at IIT Hyderabad on 27th October, 2018.
- Mahesh. K.**, has participated in “Volley Ball State level Engineering Premier League” held at CVR college of Engineering, Hyderabad, during the month of December 2018.
- Roshan. P.**, has participated in carnations, Worlds Gratest Anthology by Flavours of Instagram(FOI) on 20th October 2018.

## IV FDP'S & CONFERENCES PARTICIPATED BY FACULTY

1. **Tirupati Rao. S.**, attended AICTE sponsored One Week QIP short term course on “Advances in Dynamic Transportation System” organized by IIT Bombay, during 2-6 July, 2018.
2. **Phani. S.S.**, attended all India seminar on “Recent Developments in Concrete Composite (RDCE-2018)” at Indian Institute of Engineers, Hyderabad, during 24-25 Aug 2018.
3. **Raju. G.**, completed 4-week online certification course on “Geotechnical Engineering Laboratory” during August- September 2018.
4. **Reddy. K. R. C.**, attended one day workshop on “Connect Engineers to MEP Industry” organized by JNTU Hyderabad, on 15 Sep-2018.
5. **Phani. S.S.**, attended one day workshop on “Connect Engineers to MEP Industry” organized by JNTU Hyderabad, on 15 Sep-2018.
6. **Tirupati Rao. S.**, attended one day workshop on “Connect Engineers to MEP Industry” organized by JNTU Hyderabad, on 15 Sep-2018.
7. **Phani. S.S.**, presented a paper on “Under Ground Drainage System at Uruvakonda, Ananthapur Dist.” in ICRTEMMS-2018 at CBIT, Hyderabad, during 25-27 October 2018.
8. **Divya. K.**, attended one month Faculty Induction Program at Mahatma Gandhi National Council for Rural Education organized by Ministry of Human Resources and Development, Govt. of India, during 01 Nov - 30 Nov 2018.

## V EXPERT LECTURES ORGANIZED BY THE DEPARTMENT

1. On “**Applications of Fluid Mechanics in Civil Engineering**” was conducted on 08-08-2018, by Prof. N. Suresh Kumar, Osmania University, Hyderabad. The lecture was attended by second year students and faculty which covered the various aspects in application of Fluid mechanics in the real world such as
  - Properties of fluids
  - Fluid Kinematics
  - Closed conduit flow
  - Open Channel flows
  - Boundary Layer concepts.
 The session was fruitful with discussions on importance of fluid mechanics between students and speaker.
2. On “**Pavement Materials and Its Characterization**” was conducted on 15-09-2018, by Dr. R. Srinivasa Kumar, Osmania University, Hyderabad. The lecture was attended by third year students and faculty. He enlightened the listeners on the various testing methods of highway materials which included tests on Aggregates, Bitumen and soil and its importance.



**Applications of Fluid Mechanics in Civil Engineering - Expert Lecture Photos**



**Pavement Materials and Its Characterization - Expert Lecture Photos**

## VI

## FIELD VISITS

### 1. A visit to “Eco-Care Buildings Innovations Pvt. Ltd.”

A visit to Eco-Care Buildings Innovations Pvt. Ltd. at Ghatkesar, Hyderabad was organized on 13th August 2018 for B. Tech III year students. The faculty members who accompanied the students for the visit were Dr. S. S. Phani, Mr. D. Rama chander, Ms. D. Divya Vani, Ms. K. Priyanka, Ms. G. Vanisri, Mr. B. Prasad Rao and Mr. K. Dasarath. Students were shown three types of constructions at single site, among which Pre-Cast Construction & Earthquake Resistant Building Construction were explained in detail. Later students were taken to casting unit of Steel sections, where students were exposed to the real time rolled steel sections such as I- Sections, Channel Sections, etc. This visit helped students to improve their practical knowledge.



**Eco-Care Buildings Innovations Pvt. Ltd. - Visit Photos**

## 2. A visit to “PRECA Solution India Pvt. Ltd.”

A visit to PRECA Solution India Pvt. Ltd. at Narsingi, Hyderabad was organized on 24th August 2018 for B. Tech IV Year students. The faculty who accompanied students to the visit were Mr. V. Goutham, Mr. G. Sampath Kumar, Mrs. Vani sri and Mr. B. Prasad Rao. The Construction of Function Hall by using Pre-Cast Method was illustrated to the students which included:

- The Pre-Cast panel members of different shapes & sizes used for the construction of Function hall.
- The load distribution mechanism of different panel members after installation at their location based on design.
- The Columns & Beams and their alignment at the joints.
- Filling sealant material “Seika” to fill the gap between each pair of Pre-Cast member joint.
- Precautions to be taken while erecting the Pre-Cast members at the site.
- Brief introduction on manufacturing process of Pre-Cast members.

The visit helped the students in understanding Pre-Cast construction process.

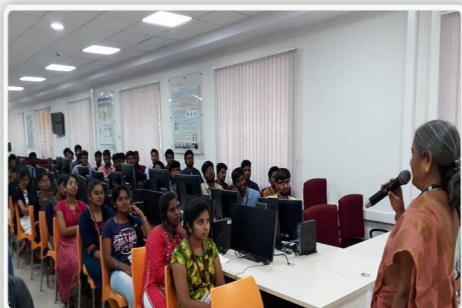


PRECA Solution India Pvt. Ltd. - Visit Photos

## 3. A visit to “National Remote Sensing Centre (NRSC), Outreach Centre”

A visit to National Remote Sensing Centre (NRSC) Outreach Centre, at Jeedimetla Hyderabad was organized on 30th October 2018 for B. Tech IV year students. The faculty members who accompanied the students for the visit were Dr. K. R. C. Reddy, Dr. John Oral Bhaskar, Prof. S. Tirupati Rao, Mr. V. Goutham and Ms. K. Divya.

Demonstration on various NRSC organizations such as ISRO, Satish Dhawan Space Centre etc., and the works carried out at various organizations were given to the students. After the demonstration a quiz was conducted on basics of Remote sensing techniques. Video on satellite launching procedure from the first phase of procurement of assembling parts to the final stage of launching the rocket was presented. Later, the students were taken to the satellite image exhibition in which various satellite images of different resolutions and models of satellites were displayed. The exhibition helped the students to understand the techniques of remote sensing technology and convert it into the way the end user needs.



NRSC - Outreach Centre - Visit Photos

## VII

## EVENTS ORGANIZED BY THE DEPARTMENT

### 1. Graduation Day

The college Graduation Day was organized on 12th July 2018. The first outgoing batch (2014-2018) of Civil Engineering department students shared the stage along with students of other departments. The guests on the occasion were Sri. Raghu Rao (Head of Business Development, Peer Nova) and Sri. Kumar Mynampati (Associate Vice President, Infosys) along with Sri.G. R. Ravinder Reddy (Secretary, Geethanjali Group of Institutions) and Prof. Udaya Kumar Susarla (Principal –GCET) and Dr. M. Ravi Kumar (Principal –GCP). The program started with an Invocation song followed by lighting of the lamp by the dignitaries and welcome speech by Dr. Madhumathi. All the graduates stood with their graduation dress, came up on the stage as the names were read out by Head of the Department and received Degree Certificates from the Chief Guest. It was a moment that really added charm to the atmosphere with a sense of achievement. The vote of thanks in the form of blessings was given by Dr. Madhumathi. End of Graduation Day was concluded with National anthem and Photo session.



Graduation Day Photos

### 2. Orientation Program

The Fresher's orientation program was organized by GCET on 16th July 2018 in campus. The chief guest of the program Prof C. Nageshwar Rao addressed the newly joined students who were accompanied by their parents. The heads of all the Departments were introduced to the gathering by the principal Dr. Udaya Kumar Susarla. The students and parents

were familiarized with the facilities available in the college. The chairman and principal clarified the doubts of parents and students regarding the placements and gave the concluding remarks. As part of B. Tech program the students of Civil Engineering department have actively participated in three week ‘Induction Program’. The students were addressed and motivated by various eminent speakers from different organizations. As part of Induction Program the students were taken to “Ramakrishna Math” on 31-07-18 to attend one day program on Character Building.



Orientation Day Photos

### 3. Fresher's Day

Civil Engineering Department of GCET organized a lavish Fresher's welcome party for the batch of 2018-19 within the college premises. Fresher's party is all about welcoming newcomers in a friendly atmosphere, making the best start to the new academic year and a time to create everlasting relationships with each other. The event is indication of the union among the students. With pulsating ambience, flashing lights and foot tapping music, the party began with a blast. All the events were artistically and beautifully presented and the audience were kept enthralled by mind blowing performances of dances, songs and mimicry. Freshers loved the welcome and appreciated the whole-hearted efforts of their seniors. It is said that a good start signifies a great end, and the Freshers could not have asked for the better kick off.



Fresher's Day Photos

### 4. Parent Teacher Meeting

The parent teacher meeting has been conducted on 8th September 2018 (Saturday) in the Department of Civil Engineering for II & III Year students. All the class in-charges including the subject teachers were present in the department with relevant information such as attendance status, backlogs, Marks etc. All the doubts of the parents were clarified and they were advised that their wards to be regular to class work.



## VII WORKSHOPS CONDUCTED IN THE DEPARTMENT

### 1. Workshop on “Auto CAD- CIVIL”

A Two – Day workshop on “Auto CAD- CIVIL” is organized by Civil Engineering Technical Association (CETA) in collaboration with Canter CADD – ECIL, Training Institute during 12th -13th October 2018 for III Year students.

The workshop was inaugurated by Dr. P. Rama Mohan Rao, Head of the Department-GCET. Mr. B. Santhosh (Trainer, CAD Desk, ECIL) started the session by explaining the different commands of Auto CAD and its importance.

The workshop covered the following topics

- Introduction to Auto CAD.
- Basic design tools.
- Operating co-ordinate systems.
- Basic 2-D Drafting.
- Building-Plan, Elevation and Cross-section.

Students were very excited and participated actively in the sessions.



Auto CAD- CIVIL - Workshop Photos

### 2. Workshop on “GIS & Its Applications in Civil Engineering”

A Two – Day workshop on “GIS & Its Applications in Civil Engineering” is organized by Civil Engineering Technical Association (CETA) in collaboration with Lambodara Technologies - Hyderabad, during 2nd -3rd November 2018 for IV Year students.

The workshop was inaugurated by Dr. P. Rama Mohan Rao, Head of the Department-GCET. Mr. M. N. Baz Reddy has started the session by explaining the importance of GIS and Its applications in Civil Engineering, the session further continued by Prof. A. Sravan Kumar. The workshop created awareness on multiple uses of GIS, while providing an opportunity to the students for hands-on demonstrations and with basic training on various topics of GIS which include Map study, Geo-referencing, Spatial Analysis etc.



GIS & Its Applications in Civi Engineering - Workshop Photos

### 3. Faculty Training Program on “STAAD Pro.”

A Three– Day Faculty Training Program on “STAAD Pro.” is organized by Civil Engineering Technical Association (CETA) in collaboration with CAD DESK– ECIL, Training Institute during 4th -6th December 2018 for faculty of Civil Engineering.

The program was inaugurated by Dr. P. Rama Mohan Rao, Head of the Department-GCET. The main objective of FTP was to train the faculty in Structural Modeling, Design and analysis of different types of buildings. It has provided an overall look on “STAAD Pro-select”. The FTP covered the following concepts:

Analysis of

- Continuous beam – Calculating SFD, BMD and Elastic curve.
- 2D and 3D frame-Calculating SFD and BMD.
- Multi-storey buildings by considering different load combinations.
- Commercial complex.
- Water tank.



STAAD Pro. - FTP Photos

# Article

## ***Importance of selection of cement grade used in construction of different structures***

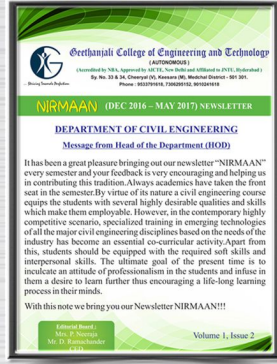
*The grade of Portland cement refers to the compressive strength of a mortar cube prepared with that cement and measured after 28 days of curing. The use of high-grade cement should not be taken for granted to yield high grade (strength) concrete as the strength of concrete depends on the mixture of cement, sand, coarse aggregate and water. In fact, the cement's grade has no relationship to the strength of concrete. It is possible to produce concretes of wide-ranging strengths using a particular grade of cement. Moreover, the term 'grade' has nothing to do with quality; increase in the grade does not increase the quality of the cement. Two cements of different grades can have the same quality. Every structure has to satisfy the requirements of strength and durability. Strength is the ability of the structure to withstand load. A structural element of concrete may possess high strength, but may deteriorate sooner than expected, making it a material of poor quality. Here the quality is with reference to concrete and not that of cement. But if a grade of cement is directly responsible for producing quality, the cement can be blamed as that of low quality. But any grade cement that satisfies the minimum requirements prescribed by the code, generally, should produce concrete of desired properties if the mix proportioning is done properly. To put it in a proper perspective, a grade of cement can be said to be of good quality if the concrete made with it satisfies both the strength and durability requirements. The strength requirements is satisfied by choosing the proper amount of cement, limiting the amount of water, consolidating the mixture well and curing the hardened concrete as long as possible. Durability, on the other hand, depends on several factors that are attributable both to the material and to the exposed environment. The question here is what grade of cement should we use for the concrete? Can we expect to get a better-quality concrete with high grade cement? The only advantage in using high grade cement is the faster rate of gain in strength during the initial two or three weeks. There are many other disadvantages in using higher grade cements. Higher grade cements are promoted by the industry as economical cements as less quantity of cement is required. Reduction in the amount of cement, when the quality of water is based on workability, leads to higher water to cement ratio and more voids in concrete. Further, without adequate quantity of fine material the concrete becomes unworkable. A reduction in the quantity of cement in ordinary concrete produces a harsh mixture, honey combing, and more voids. All these points out that the use of higher-grade cements is absolutely unnecessary and in fact detrimental, for most of the structures we build every day. We consumers are trapped into buying something that we definitely know will produce concrete of poor quality and low durability.*

*Contributed by: Shan Somayaji, Civil Engineering Department, IIT, Chennai.*

# PERIODICAL EDITIONS



**NIRMAN**  
Volume I, Issue I  
(Jun 2016 - Nov 2016)



**NIRMAN**  
Volume I, Issue II  
(Dec 2016 - May 2017)



**NEWSLETTER**  
Volume II, Issue I  
(July 2017 - Dec 2017)



**PRAGATHI**  
Volume II, Issue II  
(Jan 2018 - June 2018)

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