



**PRAJWALAM**

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**A NEWSLETTER OF CIVIL ENGINEERING DEPARTMENT**

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**EDITOR'S VOICE:**

**Utilization Of Waste Plastics In Construction Of Pavements**

According to Central Pollution Control Board (CPCB) ,India generates 56 lakh tones of plastic waste annually.

The roads constructed using waste plastic, are known as Plastic Roads. Plastic roads mainly use plastic carry bags, disposable cups & bottles that are collected from garbage dumps. When mixed with hot bitumen, plastics melt to form an oily coat over the aggregate and the mixture is laid on the road surface like a normal tar road.

Materials Used:- AGGREGATE:- 20mm, 10 mm BITUMEN:-60/70,80/100 grade bitumen. WASTE PLASTIC:-Waste plastic in the shredded form.

**Construction of plastic roads:**

Step 1 : Plastics waste (bags ,cups , bottles ) are cut into a size between 2.36mm & 4.75mm using shredding machine.

Step 2 : (a) The aggregate mix is heated to 165°-170°c (as per the HRS specification) and transferred to mixing chamber.

(b) Bitumen is heated up to 160°c (HRS Specification) to have good binding and to prevent weak bonding. (Monitoring temperature is important).

Step 3: At the mixing chamber, the shredded plastics waste is added. It get coated uniformly over the aggregate within 30 to 60 seconds, giving an oily look.



Step 4: The plastics waste coated aggregate is mixed with bitumen and the resulted mix is used for road construction. The road laying temperature is between 110°c to 120°c.

The waste plastic bitumen mix forms better material for pavement construction. Use of waste plastics for pavement is best methods for disposal of waste plastics.

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## **ABOUT DEPARTMENT :**

Civil engineering is a professional engineering discipline that deals with the design, construction and maintenance of the physical and naturally built infrastructure for fulfillment of Basic Needs of human race including Transportation, Communication, Energy production, Religious, Cultural, Sports and Community and Social and Developmental activities like bridges, roads, canals, dams and buildings. Department is the foremost in imparting Civil Engineering education in KITS. Well qualified and experienced faculty is one of the salient feature of the department and acute care is taken to ensure that students acquire essential engineering concepts with in-depth understanding In addition to, the civil department is well equipped with required departmental laboratories with tools and equipments.

### **Vision of the Department:**

Create a congenial learning environment for imparting knowledge, skills and values.

### **Mission of the Department:**

- M1 Providing state of the art facilities for learning and practicing.
- M2 Providing additional skills and training to meet the needs of the industry.
- M3 Inculcating professional and ethical values and serve the industry, society and environment.

### STUDENT'S RESULTS:

The Department of Civil Engineering Heartily congratulated all the toppers of academic year 2018-2019 students for fabulous performance in the last semester Exams. Let this be considered as a source of inspiration to the entire students of the department and an proud of us to excellence. The third year and second year students give best performance of their results. Big thumbs to all the faculty members who prepared the students for such a great success.

<b>III-II TOPPERS</b>				
<b>S.NO</b>	<b>REG.NO</b>	<b>STUDENT NAME</b>	<b>PERCENTAGE</b>	<b>PHOTO</b>
1	17JR5A0103	NIDAMANURI ANITHA LAKSHMI	9.14	
2	16JR1A0107	DONDAPATI APARNA	8.86	
3	16JR1A0110	KUNALA LAKSHMI SUBHA LASYA	8.71	
<b>II-II TOPPERS</b>				
<b>S.NO</b>	<b>REG.NO</b>	<b>STUDENT NAME</b>	<b>PERCENTAGE</b>	<b>PHOTO</b>
1	18JR5A0101	SISTLA DIVYA	9.17	
2	17JR1A0169	SHAIK TASNEEM SULTANA	8.26	
3	17JR1A0148	KATHALI LALU PRASAD	8.26	

## YOGA DAY CELEBRATIONS

**Theme :** “Yoga for Health” The UN International Day of Yoga is celebrated every year on June 21<sup>st</sup>. It was one of the biggest events in the country. On December 11 in 2014, the United Nations General Assembly declared June 21<sup>st</sup> as the International Day of Yoga. On this event the KITS College celebrated YOGA day. All students and faculty members actively participated in YOGA in the college premises. Sri A.Kishore Sastry yoga master give the importance of yoga in our daily life.



**Images of students participating yoga day celebrations**



**Felicitation of sastry garu with principal Dr.P.Babu garu & Director Dr.K.Haribabu garu**



## WORKSHOP ON REMOTE SENSING & GIS

The IGS-Guntur Chapter in association with IGS Student Chapter-KITS and Dept.of Civil Engineering, KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, Vinjanampadu, Guntur, Andhra Pradesh conducted a One-day Workshop on “Remote Sensing &GIS” on 29<sup>th</sup> June, 2019. There was overwhelming response to this workshop and about 200 participants attended the workshop which composed professional engineers, faculty and students from various engineering colleges in and around Guntur.

Prof.J.KishoreBabu, Vice-Chairman IGS Guntur Chapter mentioned that these workshops would provide both, the teachers and the students, a platform on which they could expand the horizons of their knowledge. Sri K.SubbaRao, Chairman and Dr.P.Babu, Principal also addressed the gathering.

There were two speakers for the technical session. Dr.R.S.Mahendran Scientist-Dean & Head Indian National Centre for Ocean Information Services,Hyderabad. discussed on “Remote Sensing &GIS applications pertaining coastal zone management. Mrs.A.Sailaja, Executive Engineer, Office of the Director General, WALAMTARI, Hyderabad discussed on “Introduction to QGIS”. The workshop concluded with a prolific discussion by the participants with the resource persons.



**Inauguration of workshop**



**R.S.Mahendran delivering lecture**



**Mrs.A.Sailaja –Introduction to QGIS Software**



**IGS- Guntur Chapter Secretary with staff**

## Scientist of the Month:



### **Dr. Alfred G. Gilman (1941-2015)**

Dr. Alfred G. Gilman, a pharmacologist whose work on G-proteins, which allow chemical signals to be transmitted to the interior of cells, earned him a shared Nobel Prize in Physiology or Medicine in 1994 and advanced the understanding of cancer, diabetes and other diseases, died on Wednesday in Dallas. He was 74. The cause was pancreatic cancer, his daughter Amy Ariagno said.

In the 1970s, Dr. Gilman was conducting research on leukemic cells at the University of Virginia School of Medicine in Charlottesville. Like many other scientists, he was interested in finding out exactly how chemical signals are transmitted from the outside to the inside of a cell, a process known as transduction.

Leukemia cells, he found, do not respond to external signals sent by hormones. He and his research team identified a protein lost during mutation as the cause of this loss of function. They then found a protein in normal cells that, when put into the membrane of a leukemia cell, restored the damaged protein's ability to act as a transducer. This made it possible for the information contained in an exterior chemical signal to be translated into a second signal that the cell could understand.

In 1980, Dr. Gilman isolated the molecule that accomplished the translation. He called it a G-protein because it binds with guanosine triphosphate, or GTP, a molecule that Martin Rodbell, with whom he would share the Nobel Prize, had identified as central to the transduction process.