

DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION

VIMAL JYOTHI ENGINEERING COLLEGE, CHEMPERI, KANNUR

0460-2213399, 2212240

INSTRUMENTATION..

The design, construction, and provision of instruments for measurement, control, etc; the state of being equipped with or controlled by such instruments collectively." Instrumentation is one of the major areas of science and technology which makes a great impact on education research, industry, agri-

culture, medicine and health etc. The primary objective is to provide a broad foundation of theoretical and practical knowledge in the areas of electronic circuits, digital circuits, computers, electrical machinery, process controlling , Instrumentation systems and its design.

Long Term Goals

- > To establish the 'Centre of Excellence' in Virtual Instrumentation
- > To equip our department laboratories to meet industrial needs
- > The department plans to sign in MOUs with Instrumentation Related Companies.



**Approved a new batch for
M.TECH in Control &
Instrumentation by AICTE
affiliated to Kannur
University**

VISION & MISSION

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"The department strives to enrich professionals of high competency in the arena of Instrumentation Engineering & mould them to adopt the crux of the matter in the field of Automation."

"To prepare the students to envisage beyond the hypothetical & belong to a new era of acquisition & application of Instrumentation Technology to meet the requisition of the changing World"

FROM HOD's DESK



“I know not how to aid you, save in the assurance of one of mature age, and much severe experience, that you can not fail, if you resolutely determine, that you will not.”
Abraham Lincoln

It gives me an immense pleasure to issue the 5th edition of our departmental newsletter **METRON**. To begin with, I would like to congratulate the members of this newsletter for having taken much effort in bringing out excellent articles and organizing it in a systematic manner. I would like to congratulate all the 2012-2013 passed out students for their excellent performance in the s7 university examination and wish them more success in the future.

The Department strives to produce highly skilled professionals who apply specialist skills

and knowledge to everyday workplace situations. Besides having highly developed technical abilities they are expected to carry out research and to keep their knowledge continually up-to-date. As a new batch of 3rd semester students enter our department in the month of June, the inflow of both academic and non-academic talent sustains. I am very happy to announce that the Post graduate course **M. Tech in Control & Instrumentation** started under our department in 2013. This will be the 1st Department which is starting M. Tech in Control & Instrumentation in Kerala.

The Department is having well qualified and experienced faculty members to improve and enhance the knowledge of the student community. The department has good laboratory facilities equipped with the latest technologies. **METRON** is a platform to showcase the extracurricular talents and interests of both staffs and students. **METRON** offers opportunity for the students to express their creativity through effective writing.

On a closing note, I wish all the students of our department good luck to excel in their exams in the new academic year and bring laurels to our college as well as to our department. Presenting the latest edition of **METRON**, hope you all enjoy the reading

BID ADIEU TO OUR BELOVED FR. GEORGE NELLUVELIL



EIE Dept. of Vimal Jyothi Engineering College wishes Fr. George Nelluvelil (Bursar, VJEC) success & prosperity in all his future endeavours.

AUTOMATIC IRRIGATION IN POLYHOUSE FARMING

The indigenous modernity has affected the earth's climate & environmental condition adversely. The unpredictable change in the climatic conditions has affected the crop which resulted in decrease in agricultural productivity all over the world. To avoid this crisis large amount of fertilizers & pesticides were used, which also caused the increased production cost & decrease the quality of the crop. Also the labor cost has increased & their availability has reduced. To avoid the disadvantages of the adverse climatic conditions poly-house farms were introduced.



The crops require precise amount of water & fertilizers during each period of the crop growth, which cant be provided by the human labours. So to provide the precise amount of water & fertilizers, we introduce a PLC based automatic system, which also monitors the amount of fertilizer given using the LabVIEW software. The farming is done in a polyhouse in order to avoid adverse climatic conditions like rise in temperature, heavy rainfall etc. The main elements which plant require for their growth are nitrogen, potassium, phosphorus & water in adequate amount at various stages of the crop growth. The PLC based automated system will be able to schedule the entire supply of fertilizer & water during the entire period of crop growth. The level of water & fertilizer in tank is measured using the continuous type level sensor. Its output can be interfaced to the computer using a Data Acquisition Card. So that a real time monitoring of the level of each tank is possible & by knowing the volume of the tank, we can obtain the amount of water & fertilizer given to the crop.

Project Done by: Nithin P K, Abhishek T P, R Sreerakh, Akhil Valsaraj
(Clockwise from Left), S8 AEI (2009 Admission)

Project Guided by: Dhanoj M (Asst Professor, E&I)

QUIZ 4 U . COM

1. An atom's atomic number is determined by the number of—
2. Which resistive component is designed to be temperature sensitive?
3. When parallel resistors are of three different values, which has the greatest power loss?
4. Another name for a unity gain amplifier
5. What is the frequency of a clock waveform if the period of that waveform is



**If your actions
inspire others to
dream more, learn
more, do more
and become
more, you are a
leader.**

**John Quincy
Adams**



The department of Mechanical Engineering of Vimal Jyothi Engineering College, Chemperi conducted a two day National Seminar on the topic “Advances in Renewable Energy Technologies” on 29th & 30th May 2013 under the sponsorship of Kerala State Council of Science.

The seminar covered the emerging technologies in the energy conservation field. Representing the Electronics & Instrumentation Department in association with Instrument Society of India (ISOI), Mrs. Mary Mol Paul delivered a talk on the topic “Industrial Measuring Instruments for Energy conservation & preservation”.

Some of the commonly used industrial measuring instruments like magnetic flow meter, zirconia oxygen analyser, turbidimeter, infrared gas analyser, pressure transmitter & tunable diode laser spectroscopy analyser were discussed in the seminar. The basic working of these instruments & the newly developed instruments by the leading instrumentation company, YOKOGAWA favoring in energy conservation & preservation were described. The seminar gave the students a clear idea about how the instrumentation field can help in the energy conservation & energy preservation.

QUIZ 4 U ANSWERS

1. Protons
2. Thermistor
3. The smallest resistance
4. Voltage follower
5. 0.8 MHz

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