KG REDDY
College of Engineering
& Technology

Certificate Course in Electrical and Electronics Engineering with Specialization

"INDUSTRIAL AUTOMATION USING PLC AND SCADA"

Held On

23rd September to 30th September 2019

Department of Electrical & Electronics Engineering,

KG Reddy College of Engineering & Technology

Chilkur(Village), Moinabad(Mandal), Hyderabad RR Dist-501504

Course coordinator

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M),
R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology
(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

SUMMARY REPORT ON INDUSTRIAL AUTOMATION USING PLC AND SCADA

About the Course

The certificate course on Industrial Automation using PLC and SCADA is concluded its work successfully by department of electrical and electronics engineering (EEE) in KG ready college of Engineering and technology (KGRCET), Hyderabad, Telangana. This course is a forum to bring together students to discuss innovative ideas and diverse topics of this course on next generation of information technologies. Department has taken a new step for students to improve the quality of study through this course and become most wide scale, extensive, spectacular event in electrical and electronics engineering. The six days course was held in two locations of the department (a) Department E-learning room for theory class and (b) Department simulation lab for practical class.

In the most basic terms, a programmable logic controller (PLC) is a computer with a microprocessor but has no keyboard, mouse or monitor. It is essentially built to withstand very harsh industrial environments.

It is a distinctive form of computer device designed for use in industrial control systems. It has a robust construction and unique functional features such as sequential control, ease of programming, timers and counters, easy-to-use hardware and reliable controlling capabilities.

Scope of the Course

The logic controllers are often tasked to control and monitor a very large number of sensors and actuators. They are different from other regular computer systems in their extensive I/O (input/output) arrangements. It is designed to be enormously robust, so it could withstand harsh industrial environments such as extreme temperatures, vigorous vibrations, humidity and electrical noise. In addition to being used as a special-purpose digital computer, the PLC can be used in other control-system areas and industries. This explains why PLCs are often referred to as industrial PCs.
Once programmed, the PLC will perform a sequence of events triggered by stimuli referred to as inputs. It receives these stimuli through delayed actions such as counted occurrences or time delays.
It covered significant recent developments in the field, both of a foundational and applicable character of this course. An important feature of this course is very useful in service carrier. The selected topics of this course helped to make project work. This permits also a rapid and broad dissemination of project and research work.

Objectives of the course

The objective of the course is to bring together experts from academic institute and training institute for sharing of knowledge, expertise and experience in emerging trends related to the computer science and engineering topics.

The Programmable Logic Controllers - Design Training Courses are proposed to give you all around learning.

It introduced the advances in the field of industry operation and control. The software design aspects of the circuits are introduced to students.

Day-1
(23-09-19)

Time: 09:00 AM to 11:00 AM

Inauguration of certificate course

The first day of certificate course started with Welcoming and Opening Ceremony at the KGRCET conference Hall. The following dignitaries were representatives of the certificate course who were addressed and pointed out the importance on course with short welcoming speeches.

Welcome addressed by Ms. P. Samyuktha, HOD, EEE, KGRCET
About the certificate course by Director Dr. Rohit Kandakatla, KGRCET.
Importance of this course by expert trainer Mohammed Zubair, Industry Expert, Hyderabad
Interaction with 3rd year and 4th year 1st semester students

Time: 11:10 AM to 04:15 PM

Industrial Automation is the technology by which a process or procedure is performed with minimum human assistance. Automation or automatic control is the use of various control systems for operating equipment such as machinery, processes in factories, boilers and heat treating ovens, switching on telephone networks, steering and stabilization of ships, aircraft and other applications and vehicles with minimal or reduced human intervention. Some processes have been completely automated. These special computer devices are different from regular computers such as PCs or smart phones in that:

1. A PLC performs only a single set or sequence of tasks, with greater reliability and performance, except when it is under real-time constraints. This is in contrast to regular PCs and smart phones that are designed to execute any number of roles simultaneously within the Windows framework.
2. The PLC has a number of features that you don't find in normal computers, such as protection from the open area conditions like heat, dust and cold.
3. It is low cost compared with other microcontroller systems. When you're using a PLC in various applications, you only need to change the software component for each application. With other microcontroller systems however, you would have to change the hardware components too with different applications. Each PLC system has three modules namely: CPU module, power supply module and one or more input/output (I/O) module.

- CPU Module: This module is comprised of a central processor and its memory component. This processor performs all the needed data computations and processing by receiving inputs and producing corresponding outputs.
- Power supply module
  PLC's computer circuitry runs on a 5V DC output and this is supplied by the power supply module. This is essentially the module responsible for powering up the system.
  It receives AC power and converts it to DC power that the two other modules (CPU and input/output modules) use.
- I/O Modules
  The input/output modules are responsible for connecting the sensors and actuators to the PLC system to sense the different parameters such as pressure, temperature, and flow.

As a result, tutorial and practical sessions have been prepared in accordance with course scope to discuss the challenges, opportunities and problems of PLC design in various fields of Electrical and Electronics Engineering.

OUTPUT:

This course was not only shared the knowledge among students but also tied up with expert for upcoming course.

The main outputs are mentioned below:

- The expert shared his knowledge among students.
- Students learned from this course and tried to use the techniques for their project as well as research work.
- Students interact with expert to gain their additional knowledge for future research work.
- Students found new ideas, concept, knowledge on technology, different application of methodologies from different session of course.
- Department tried to do their collaborative research work on this course with university as well as industries.
- It was created different domains of research field from this course for possible topic of computer science engineering.
- It helped to make industrial project.
- It helped to student for campus recruitment.

Summary of Participants

(a) Number of students attended this course:80
(b) Number of certificate issued: 80
(c) Number of students passed the course:80

Photograph showing industry expert Mohammed Zubair explaining the need of PLC

Day-2
(24-09-19)

Areas where programmable logic controllers are applied PLCs are used in various applications in industries such as the steel industry, automobile industry, chemical industry and the energy sector. The scope of PLCs dramatically increases based on the development of all the various technologies where it is applied. In the Travel Industry, PLC has been used to monitor the safety control system and to operate lifts and escalators.

Students listening to the lecture on PLC and SCADA

Glass industry: PRCs controllers have been in use in the glass industry for decades. They are used largely to control the material ratio as well as to process flat glasses. The technology has been advancing over the years and this has created an increased demand for the PLC control mode for use in the glass industry. The production of glass is an elaborate and sophisticated process so the companies involved often use PLCs with the bus technology in its control mode.

Overall, the PLC is applied in both analogue data recording in the glass production, and in digital quality and position control.

Day-3
(26-09-19)

A distributed control system comprised of PLC in its user mode and configuration software are used in the industry's production and management processes. The PLC in particular, controls ball milling, coal kiln and shaft kiln. Other examples of PLC programming applications that are in use in various industries today include water tank quenching systems in the aerospace sector, filling machine control system in the food industry, – industrial batch washing machine control and closed loop textile shrinkage systems.PLC is also used in the coal-fired boiler fan change-over system in hospitals, corrugation machine control system and silo feeding as well as injection molding control systems in the plastic industry. The programmable logic controllers at Mobile Automation includes a huge variety from various top industry manufacturers such as Allen-Bradley and Omron. All these can be put to various applications in key departments of your business to standardize the production process and increase your return on investment.

Students listening to the lecture of resource person Mr.Ashutosh

BENEFITS OF PROGRAMMABLE CONTROLLERS

1. Programmable controllers are made of solid state components and hence provide high reliability.

within the input image table. That particular location is dedicated solely to the task of keeping track of the latest condition of its input terminal. As mentioned in earlier section, if the input terminal has 5v dc power fed to it by its input device, the location within the input image table contains a binary 1(HI); if the input terminal has no 5v dc power fed to it, the location contains a binary 0(LO).The processor needs to know the latest input conditions because the user program instructions are contingent upon those conditions. In other words, an individual instruction may have one outcome if a particular input is HI and a different outcome if that input is LO.

(b) Output image table:

The output conditions are stored in the output image table, which is another portion of the processor's memory. The output image table bears the same relation to the output interface of the I/O section that while terminals are analog inputs. You can directly connect any analog input to the processor via these terminals. Analog signal from these terminals is first converted to digital value via programmable peripheral interface (PPI). The I/O section's output modules are functionally the same as the output amplifiers. They receive a low power digital signal from the processor and convert it into a high power signal capable of driving an industrial load. A modern PLC output module is optically isolated, and uses a TRIAC, power transistor or relay as the series connected load controlling device. Terminal 1 to 8 are these type of O/P terminals whereas terminal D/A is Analog output terminal from processor. Each output device is wired to a particular output terminal on the I/O interface. Thus, for example, if output module 1 receives a digital 1 by applying 5v dc to output terminal 1, thereby illuminating LED is extinguished.
Besides 5v dc (TTL devices), I/O module are also for interfacing to other industrial levels, including 12v dc. The input image table bears to the input modules. That is, every single output module has assigned to it a particular memory location is dedicated solely to the task of keeping track of the latest condition of its output module. Of course, the output situation differs from the input situation with regard to the direction of information flow is from the output image table to the output modules, while in the input situation the information flow is from the input modules to the input image table. The locations within the input and output image tables are identified by addresses, which refers to unique address of each terminal.

(c) Central processing unit:

The subsection of the processor that actually performs the program execution will be called the central processing unit (CPU) with reference to input and output image table CPU executes the user program and continuously updates the output image table. The output image table has a dual nature; its first function is to receive immediate information from the CPU and pass if on to the output modules of the I/O section; but secondly, it also must be capable of passing output information "backward" to the CPU, when the user program instruction that the CPU is working on calls for an item of output information. The input image table does not have its dual nature. Its single mission is to acquire information from the input modules and pass that information "forward" to the CPU when the instruction that the CPU is working on calls for an item of input information.

(d) User program memory:

A particular portion of the processor's memory is used for storing the user program instructions. We will use the name user program memory to refer to this processor subsection.

2. They are flexible and changes in sequence of operation can easily be incorporated due to programmability. They may be modular in nature and thus expandability and easy installation is possible.
3. Use of PLC results in appreciable savings in Hardware and wiring cost.
4. They are compact and occupy less space.
5. Eliminate hardware items like Timers, counters and Auxiliary relays. The presence for timers and counters has easy accessibility.
6. PLC can control a variety of devices and eliminates the need for customized controls.

Day-4
(27-09-19)

A PLC is basically a black box with a number of inputs from, and a number of outputs to, the outside world. It can make decisions, store data, do timing cycles, do simple arithmetic, convert codes, and so on. The basic difference between this black box and a hardware logic system using IC chips or a relay controlled system, is that specific coded messages are stored in areas called program memory, which are PROM or ROM and RAM chips. It is, however, much easier to change a program when a different process is required than to rewire the control system. For example, it may take electricians a couple of weeks to require a pipe mill, whereas a programmer will spend only a fraction of this time to reprogram a PLC since no wires will have to be changed. In addition, various recipes can be stored in memory and accessed when required, making the program extremely flexible.The system operates through interaction with the processor and program memory. When the power to the system is turned on, the processor reads the first instruction stored in memory and acts on this instruction. When completed, it goes back to the memory for the next instruction, and so on until task is complete. This operation is called the fetch-execute cycle. The processor communicates with the outside world via input and output modules. Programmable logic controllers (PLC) can be considered to have three parts:

1. Input/output Section

The I/O section contains input modules and output modules. Functionally, the input modules are equivalent to the signal converters (i.e. Analog to Digital or high power to low power). All modern PLC input modules use optical devices to accomplish electrically isolated coupling between the input circuit and the processor electronics.

Each input device is wired to a particular input terminal on the I/O section. Thus if the switch is closed, 5v dc appears on input terminal, converts this dc voltage to a digital 1 and sends it to the processor via programmable peripheral interface (PPI). Conversely, if the switch is open, no dc voltage appears on input terminal. Input section will respond to this condition by sending a digital 0 to the processor. The other input terminals behave identically.

The Processor

The processor of a PLC holds and executes the user program. In order to carry out this job, the processor must store the most up-to-date input and output conditions.

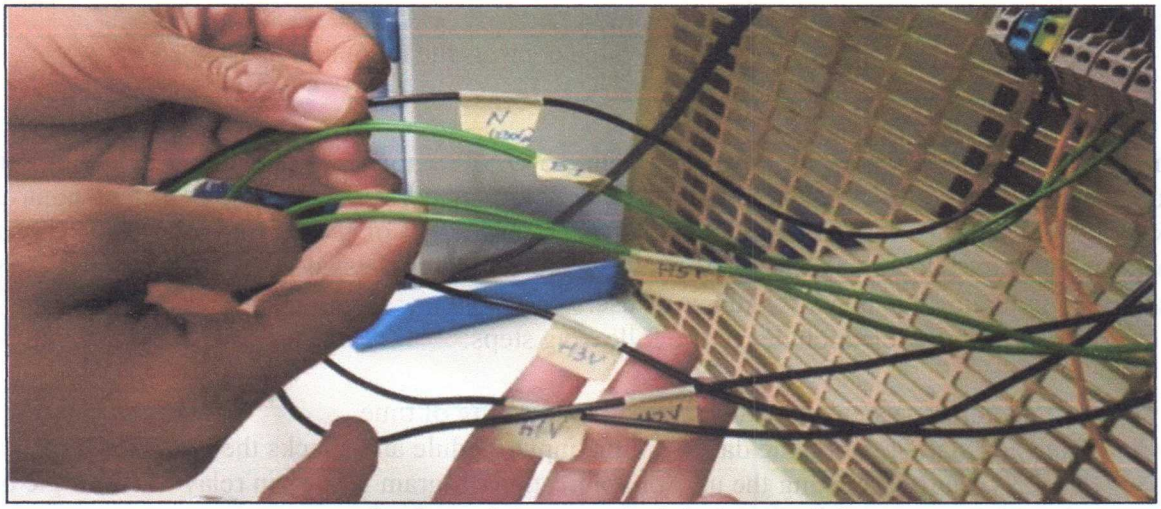
(a) Input image table:

The input conditions are stored in the input image table, which is a portion of the processor's memory. That is, every single input module in the I/O section has assigned to it a particular location

Before a PLC can begin controlling an industrial system, a human user must enter the coded instructions that make up the user program. This procedure called programming the PLC.
As the user enters instructions, they are automatically stored at sequential locations within the user program memory. This sequential placement of program instructions is self-regulated by the PLC, with no discretion needed by the human user.
The total number of instructions in the user program can range from a half dozen or so, for controlling a simple machine, to several thousand, for controlling a complex machine or process.
After the programming procedure is complete, the human user manually switches the PLC out to PROGRAM mode into RUN mode, which causes the CPU to start executing the program from beginning to end repeatedly.

(e) The complete scan cycle:

As long as the PLC is left in the RUN mode, the processor executes the user program over and over again. Figure depicts the entire repetitive series of events. Beginning at the top of the circle representing the scan cycle, the first operation is the input scan. During the input scan, the current status of every input module is stored in the input image table, bringing it up to date. Following the input scan, the processor enters its user program execution. Sometimes called "program scan". The program executes with reference to input and output image tables and updates output image table. Throughout the user program execution, the processor continuously keeps its output image table up to date, as stated earlier. However, the output modules themselves are not kept continuously up to date. Instead, the entire output image table is transferred to the output module during the output scan following the program execution.



Students doing practical during workshop

(f) Data Memory:

A PLC is a computer, after all. Therefore, it can perform arithmetic, numeric comparisons, counting, etc. Naturally the numbers and data can change from one scan cycle to the next. Therefore the PLC

must have a section of its memory set aside for keeping track of variable data, or numbers, that are involved with the user program. This section of memory we will call data memory.
When the CPU is executing an instruction for which a certain data value must be known, that data value is brought in from data memory. When the CPU executes an instruction that provides a numerical result, that result is put out into data memory. Thus, CPU can read from or write to the data memory. Understand that this relationship is different from the relationship between the CPU and the user program memory. When the user program is executing, the CPU can only reads from the user program memory, never write to it.

(g) Operating System of PLC:

The function of the operating system is to present the user with the equivalent of an extended machine or virtual machine that is easier to program than the underlying hardware.

Day-5
(28-09-19)

Due to this operating system, PLC is very easy to program. It can be programmed using electrical schemes with familiar relay symbols so that a plant electrician can easily access the PLC. Even though he does not know the assembly language or even if he may not have any familiarity with computers and electronics, he will be able to program the PLC.

The function of PLC Operating system is:

1. Loads the user program from programming device to program memory.
2. To read status of input devices.
3. To execute user program.
4. To form and update input image table.
5. As per the status of output image table controls the output devices.
6. To provide user-friendly functions.

This O.S. makes supervision over entire system, so O.S Programs are said to running in supervisory mode. When the user completely enters his program in user memory, he transfers control from PROGRAM mode to RUN mode. In RUN mode the control of the whole system is transferred to operating system. Now operating system takes care of the whole system such that the whole system becomes automatic and appears as magic to users
A typical PLC scans cycle includes of the following steps:

- The operating system starts cycling and monitoring of time.
- The CPU starts reading the data from the input module and checks the status of all the inputs.
- The CPU starts executing the user or application program written in relay-ladder logic or any other PLC-programming language.
- Next, the CPU performs all the internal diagnosis and communication tasks.
- According to the program results, it writes the data into the output module so that all outputs are updated.
- This process continues as long as the PLC is in run mode.

The resource person Mr.Mohammed Zubair explaining about the importance of the course

Day-6

(30-09-19)

This low cost PLC system was designed to satisfy hunger of Automation of Indian Industry and also helps beginners as well as development engineers to get into Automation field.
System consists of following main sections:

(1) The CPU:

The CPU uses the 89c51 microcontroller, which operates at 11.0592 MHz. It has 8k RAM, which can be used as data memory, 8k RAM that can be used as program memory as well as data memory, 8k EEPROM that can be used as program memory.

(2) Input/output Section:

This part of system is on separate board connected to processor via cable. It allows the processor to communicate with the outside world. It is also called Data Acquisition System (DAS).

This part of system provides 4 digital inputs consisting of 2 dc and 2 ac, 4 digital outputs consisting of 2 dc and 2 ac each. It also provides 8 analog inputs with following ranges:

1. –5v to +5v (one channel).
2. 0v to 10v (one channel).
3. 4mA to 20mA (one channel).
4. 0v to 5v (five channel).

(3) Timer/Counter:

The system has 2 timers or 2 counters or 1 timer and 1 counter. The timer provides maximum of 255sec delay and the counter provides maximum of 255 counts.

(4) Serial Communication:

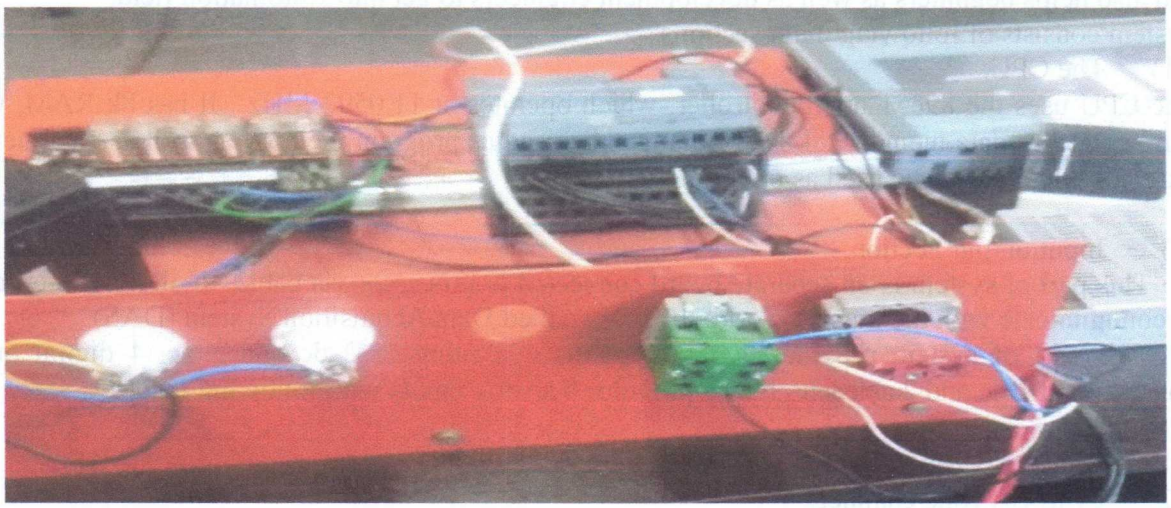
The system uses RS-232 serial data standard. Chip ICL232 is used as communication interface between RS-232 standard and TTL logic.

(5) Programming Device:

This system uses personal computer (PC) as programming device. The user can write program in user friendly language. The programming devices (PC) converts this user friendly language program into machine understandable language and transmit it to the PLC board via serial communication.

(6) Power Supply Unit:

This system provides +12v and -12v with maximum 2 amps and +5v with maximum of 1amps.PLCs are well adapted to a range of automation tasks. These are typically industrial processes in manufacturing where the cost of developing and maintaining the automation system is high relative to the total cost of the automation, and where changes to the system would be expected during its operational life. PLCs contain input and output devices compatible with industrial pilot devices and controls; little electrical design is required, and the design problem centers on expressing the desired sequence of operations. PLC applications are typically highly customized systems, so the cost of a packaged PLC is low compared to the cost of a specific custom-built controller design. On the other hand, in the case of mass-produced goods, customized control systems are economical. This is due to the lower cost of the components, which can be optimally chosen instead of a "generic" solution, and where the non-recurring engineering charges are spread over thousands or millions of units.



Photograph showing the smoke sensor being explained by resource person

After the break feed back of the program taken and the program ended with the Valedictory & Certificate Distribution. Industrial automation has recently found more and more acceptance from various industries because of its huge benefits, such as, increased productivity, quality and safety at low costs.

Course coordinator **HOD** **PRINCIPAL**

HEAD
DEPT. OF ELECTRONICS & ELECTRONIC ENGINEERING
K.G. REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
CHILKUR (V), MOINABAD, R.R. DIST-501 504

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M).
R.R.Dist., Telangana.

KGRCET/EEE/CIRCULAR/2019-20/SEM-I/ Date: 16-09-2019

CIRCULAR

All the EEE III & IV year I-semester students are hereby informed to enroll for the certification course on **"INDUSTRIAL AUTOMATION USING PLC and SCADA"** which is offered by KG Reddy college of Engineering and Technology from 23-09-2019 to 30-09-2109. The students are instructed to contact Mr.B.Lingam for completing their registration before 23/09/2019.

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M).
R.R.Dist., Telangana.

KG REDDY
College of Engineering
& Technology

KG REDDY COLLEGE OF ENGINEERING AND TECHNOLOGY

(Chilkur(vill), Moinabad (Mdl), R.R.Dist)

CERTIFICATE COURSE ON

"INDUSTRIAL AUTOMATION USING PLC AND SCADA"

HELD ON

23-09-2019 TO 30-09-2019

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

KG REDDY College of Engineering & Technology

Accredited by NAAC

KG Reddy College of Engineering & Technology
Chilkur, Moinabad, RR District
Department of Electrical and Electronics Engineering

Certificate course, Syllabus KGRCET, Hyderabad

KGRCC0205: Industrial Automation using PLC and SCADA

B.Tech.,EEE, III & IV year-I sem L-30

Course Objectives:

- To acquire hands on experience in design in PLC and Automation.
- The objective of the course is to bring together experts from training institute for sharing of knowledge, expertise and experience in emerging trends related to engineering topics.
- The main objective of PLC & SCADA Workshop is to make the aspiring engineers acquainted with the conceptual as well as practical knowledge of the Industrial Automation & latest technologies being used to achieve industrial automation.
- The software design aspects of the circuits are introduced to students.
- Practical sessions have been prepared in accordance with course scope to discuss the challenges, opportunities and problems of PLC design in various fields of Electrical and Electronics Engineering.

Course Outcomes:

At the end of the program, the student will be able to:

- Acquire hands on experience in PLC and Automation design.
- Understand working of PLC, I/O modules of PLC, Programming languages and instructions of PLC, design PLC based application by proper selection and sizing criteria, developing GUI and ladder program.

APPLICATION SYSTEM USING PLC AND SCADA BASED INTEGRATED CONTROL SYSTEM

- **ELECTRICAL**
  1. Transformer
  2. Diesel Generator
  3. Relays
  4. Lt And Ht Circuit Breakers
  5. Control Devices
  6. Measuring Devices
  7. Capacitors
  8. Motors And Pumps
- **CONTROL CIRCUIT**

1. Basics Of Control Circuits
2. Direct Online Starter(Dol)
3. Types Of Dol
4. Star-Delta Control Circuit
5. Forward –Reverse Control Circuit
6. Control Circuit Using Timers
7. Vfd(Variable Frequency-Drive) Control Circuit

- **TYPES OF PANELS**
  1. Main Low Tension Panel
  2. Meter Panel
  3. Amf(Auto Main Failure)
  4. Mcc(Motor Control Center)
  5. Pcc(Power Control Center)

AUTOMATION (PROGRAMMABLE LOGIC CONTROLLER)

- **TYPES OF PLC**
  1. Hardware And Architecture Of Plc
  2. Applications And Advantages Of Plc
  3. Programming Languages In Plc
  4. Communication Methods In Plc
- **INTRODUCTION TO LADDER LOGIC**
  1. Concepts Of No And Nc
  2. Concepts Of Latching
  3. Timers And Counters
- **DOWNLOADING,UPLOADING AND MONITORING PROGRAMS**
  1. Simulation Based Analysis
  2. Fault Finding And Trouble Shooting

- **SCADA**
  1. Introduction To Scada
  2. Creating A New Scada Project
  3. Gui Designing
  4. Graphical Designing
  5. Graphical Properties
  6. Communications With Plc
- **GSM BASED CONNECTION**
- **VFD BASED CONTROL SYSTEM**

Course Coordinator

HOD

HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGINEERING
K.G. REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

RESOURCE PERSONS PROFILE

1. SYED MOHAMMED ZUBAIR

- He has done his B.tech in EEE and M.tech in power systems and having 10 years of experience in consultancy and electrical contracting and manufacturing of Lv and hv switchgears.
- Manager of enrun India switchgear and lighting poles manufacturing company balanagar and director of Al energy systems contracting and consultancy company which deal with complete electrical design and installation and commissioning of industries and shopping complexes.
- He has done many projects like sarath city capital mall, city center mall, Divya shakthi paper mill,etc.
- He also provide job assistance for fresher's engineer in core fields such as substation engineer, relay and testing engineer, Electrical consultant, Switchgears design engineer ,substation automation engineer, industrial automation engineer, Electrical Qa and Qc engineer, Electrical Boq engineer.

2. ASHUTOSH MOHAPATRA

- He has completed his graduation in applied electronics and instrumentation engineering in the year 2014.
- He has been working in the field of industrial automation and control systems from 4+ years at AL ENERGY SYSTEMS.
- He is a professional PLC and SCADA programmer and has worked on many projects on plc based industrial application systems.
- Has conducted workshops and technical seminars on PLC and SCADA Based control systems.
- He has trained almost 250+ candidates in the field of industrial automation systems including fresher graduates as well as industrial professionals.

KG REDDY
College of Engineering
& Technology

KG REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

Chilkur (Vill) Moinabad (Mdl) R R Dist

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

CERTIFICATE COURSE ON INDUSTRIAL AUTOMATION USING PLC AND SCADA

SCHEDULE

Day	Date	Timings	Topic name
1	23-09-19	09:00 to 11:00	Certificate Course on Industrial Automation using PLC and SCADA
		11:10 to 01:00	TRANSFORMER DIESEL GENERATOR
		01:45 to 02:50	RELAYS LT AND HT CIRCUIT BREAKERS CONTROL DEVICES
		02:50 to 04:15	MEASURING DEVICES CAPACITORS MOTORS AND PUMPS
2	24-09-19	09:00 to 11:00	BASICS OF CONTROL CIRCUITS DIRECT ONLINE STARTER(DOL) TYPES OF DOL
		11:10 to 01:00	STAR-DELTA CONTROL CIRCUIT FORWARD –REVERSE CONTROL CIRCUIT
		01:45 to 02:50	CONTROL CIRCUIT USING TIMERS
		02:50 to 04:15	VFD(VARIABLE FREQUENCY-DRIVE) CONTROL CIRCUIT
3	26-09-19	09:00 to 11:00	MAIN LOW TENSION PANEL METER PANEL AMF(AUTO MAIN FAILURE)
		11:10 to 01:00	MCC(MOTOR CONTROL CENTER) PCC(POWER CONTROL CENTER)
		01:45 to 02:50	HARDWARE AND ARCHITECTURE OF PLC
		02:50 to 04:15	APPLICATIONS AND ADVANTAGES OF PLC PROGRAMMING LANGUAGES IN PLC
4	27-09-19	09:00 to 11:00	COMMUNICATION METHODS IN PLC
		11:10 to 01:00	CONCEPTS OF NO AND NC
		01:45 to 02:50	CONCEPTS OF LATCHING
		02:50 to 04:15	TIMERS AND COUNTERS
5	28-09-19	09:00 to 11:00	SIMULATION BASED ANALYSIS
		11:10 to 01:00	FAULT FINDING AND TROUBLE SHOOTING
		01:45 to 02:50	INTRODUCTION TO SCADA CREATING A NEW SCADA PROJECT GUI DESIGNING
		02:50 to 04:15	GRAPHICAL DESIGNING GRAPHICAL PROPERTIES COMMUNICATIONS WITH PLC
6	29-09-19	10:00 to 3:00	GSM BASED CONNECTION
7	30-09-19	10:00 to 3:00	VFD BASED CONTROL SYSTEM

Course Coordinator

HOD

HEAD
DEPT. OF ELECTRICAL & ELECTRONICS ENGINEERING
K.G. REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
CHILKUR (V), MOINABAD, R.R. DIST. 501 504

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I **Academic Year 2019-20** **IV B.Tech**

Technical Training on PLC and SCADA

Date: 23 – 09 - 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session - II
1	16C51A0209	GUGULOTH BHAVANI	G.Bhavani	G.Bhavani
2	16QM1A0201	ABBARABOINA AKHIL		
3	16QM1A0202	ADAMA POOJITHA	A.Poojitha	A.Poojitha
4	16QM1A0204	AKULA RAMYASRI		
5	16QM1A0205	ANANTHARAM PRASHANTH	← Absent	→
6	16QM1A0206	BEESA MAHESH KUMAR	← Absent	→
7	16QM1A0207	BORAMPET SRIDHAR REDDY	← AB	→
8	16QM1A0209	JALAGARI RAJA SHEKAR RAJU	Rajashekar	Rajashekar
9	16QM1A0210	KAVALIPAVANI	Pavani	Pavani
10	16QM1A0212	M L SATISH	Satish.	Satish.
11	16QM1A0214	MOHAMED YUNUS M	M. Yunus	M. Yunus
12	16QM1A0215	MUDANGLA RAGHAVENDRA	M.Ry	M.Ry
13	16QM1A0216	N BHARGHAVI	Bhargavi	Bhargavi
14	16QM1A0217	PASUPULA NAVEEN YADAV		
15	16QM1A0218	PODDUTURIPRAPUNREDDY		
16	16QM1A0219	PUTTA ASHOK	← AB	→
17	16QM1A0221	RISHAB DEV RAI	Rishab dev rai	Rishabdev rai
18	16QM1A0222	VENKUGARI TEJASWINI	V. Tejaswini	V. Tejaswini
19	16QM1A0223	VUMMENTHALA SAIPRAVEEN REDDY	V. Sai praveen Reddy	V. Sai praveen Reddy
20	16UR1A0201	M GNANESWAR REDDY	← AB	→
21	17615A0205	K.NAGAPRASANNA	K. Nagaprasanna	K. Nagaprasanna
22	17615A0207	K B VIKRAM NAIK	KB. Vikram Naik	KB Vikram naik
23	17615A0208	MALIPEDDI VEENA	M. Veena	M. Veena
24	17615A0210	PRODUTUR RAJASURENDER	← AB	→
25	17QM5A0201	ANABARLAREKHA GMAIL.COM		
26	17QM5A0202	B RAVI TEJA	← AB	→
27	17QM5A0204	DASARI HARSHAVARDHAN		
28	17QM5A0205	DEVARAKONDA PAVAN SUBHASH	D. Pavan Subhash	D. Pavan Subhash
29	17QM5A0206	DHAGE HEMANTH	hemanth	hemanth
30	17QM5A0207	GADDE CHANDRA KANTH	chandu	chandu
31	17QM5A0208	K NITHIN KUMAR	← AB	→
32	17QM5A0210	KAITHI MOUNIKA	← AB	→

33	17QM5A0211	KASTURI TEJASRI		
34	17QM5A0212	MADUPATHI JAGADESHWAR		
35	17QM5A0213	MOHAMMED AFRITH	AB	
36	17QM5A0215	NIMMALA DINESH		
37	17QM5A0216	PALLE DATTU		
38	17QM5A0217	PULAPALLY NANDESHWAR	AB	
39	17QM5A0218	PULIPAKA VAMSHI RAJ		
40	17QM5A0219	S SANTHOSH KUMAR		

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M), R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I **Academic Year 2019-20** **IV B.Tech**

Technical Training on PLC and SCADA

Date: 24 – 09 - 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session - II
1	16C51A0209	GUGULOTH BHAVANI	Bhavani	Bhavani
2	16QM1A0201	ABBARABOINA AKHIL		
3	16QM1A0202	ADAMA POOJITHA	A. Poojitha	A. Poojitha
4	16QM1A0204	AKULA RAMYASRI		
5	16QM1A0205	ANANTHARAM PRASHANTH	AB	
6	16QM1A0206	BEESA MAHESH KUMAR	AB	
7	16QM1A0207	BORAMPET SRIDHAR REDDY		
8	16QM1A0209	JALAGARI RAJA SHEKAR RAJU	Raj	Raj
9	16QM1A0210	KAVALIPAVANI	Pavani	Pavani
10	16QM1A0212	M L SATISH		
11	16QM1A0214	MOHAMED YUNUS M	M. Yun	M. Yun
12	16QM1A0215	MUDANGLA RAGHAVENDRA	M. Raghu	M. Raghu
13	16QM1A0216	N BHARGHAVI	N. Bhargavi	N. Bhargavi
14	16QM1A0217	PASUPULA NAVEEN YADAV		
15	16QM1A0218	PODDUTURIPRAPUNREDDY		
16	16QM1A0219	PUTTA ASHOK	Ashok	Ashok
17	16QM1A0221	RISHAB DEV RAI	AB	
18	16QM1A0222	VENKUGARI TEJASWINI	V. Tejaswini	V. Tejaswini
19	16QM1A0223	VUMMENTHALA SAIPRAVEEN REDDY		
20	16UR1A0201	M GNANESWAR REDDY	AB	
21	17615A0205	K.NAGAPRASANNA	K. Nagaprasanna	K. Nagaprasanna
22	17615A0207	K B VIKRAM NAIK	K.B. Vikram Naik	K.B. Vikram Naik
23	17615A0208	MALIPEDDI VEENA	M. Veena	M. Veena
24	17615A0210	PRODUTUR RAJASURENDER	AB	
25	17QM5A0201	ANABARLAREKHA GMAIL COM	AB	
26	17QM5A0202	B RAVI TEJA	AB	
27	17QM5A0204	DASARI HARSHAVARDHAN		
28	17QM5A0205	DEVARAKONDA PAVAN SUBHASH	Pavan Subhash	Pavan Subhash
29	17QM5A0206	DHAGE HEMANTH	Hemanth	Hemanth
30	17QM5A0207	GADDE CHANDRA KANTH	Chandra Kanth	Chandra Kanth
31	17QM5A0208	K NITHIN KUMAR	AB	
32	17QM5A0210	KAITHI MOUNIKA	Mounika	Mounika

33	17QM5A0211	KASTURI TEJASRI		
34	17QM5A0212	MADUPATHI JAGADESHWAR		
35	17QM5A0213	MOHAMMED AFRITH	AB	
36	17QM5A0215	NIMMALA DINESH		
37	17QM5A0216	PALLE DATTU		
38	17QM5A0217	PULAPALLY NANDESHWAR	AB	
39	17QM5A0218	PULIPAKA VAMSHI RAJ		
40	17QM5A0219	S SANTHOSH KUMAR	AB	

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M)
R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I | **Academic Year 2019-20** | **IV B.Tech**

Technical Training on PLC and SCADA

Date: 26–09 - 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session - II
1	16C51A0209	GUGULOTH BHAVANI	AB	
2	16QM1A0201	ABBARABOINA AKHIL	A Akhil	A. Akhil
3	16QM1A0202	ADAMA POOJITHA	AB	
4	16QM1A0204	AKULA RAMYASRI	AB	
5	16QM1A0205	ANANTHARAM PRASHANTH	AB	
6	16QM1A0206	BEESA MAHESH KUMAR	Mahesh	Mahesh
7	16QM1A0207	BORAMPET SRIDHAR REDDY	Sridhar Reddy	Sridhar Reddy
8	16QM1A0209	JALAGARI RAJA SHEKAR RAJU	Rajashekar	Rajashekar
9	16QM1A0210	KAVALIPAVANI	Pavani	Pavani
10	16QM1A0212	M L SATISH	Satish	Satish
11	16QM1A0214	MOHAMED YUNUS M	M. Yunus	M. Yunus
12	16QM1A0215	MUDANGLA RAGHAVENDRA	M.Raj	
13	16QM1A0216	N BHARGHAVI	N. Bhargavi	N. Bhargavi
14	16QM1A0217	PASUPULA NAVEEN YADAV	P. Naveen	P. Naveen
15	16QM1A0218	PODDUTURIPRAPUNREDDY	AB	
16	16QM1A0219	PUTTA ASHOK	P. Ashok	P. Ashok
17	16QM1A0221	RISHAB DEV RAI	AB	
18	16QM1A0222	VENKUGARI TEJASWINI	V. Tejaswini.	V. Tejaswini
19	16QM1A0223	VUMMENTHALA SAIPRAVEEN REDDY	AB	
20	16UR1A0201	M GNANESWAR REDDY	AB	
21	17615A0205	K.NAGAPRASANNA	K. Nagaprasanna	K. Nagaprasanna
22	17615A0207	K B VIKRAM NAIK	K.B.VikramNaik	K.B.VikramNaik
23	17615A0208	MALIPEDDI VEENA	Veena	Veena.
24	17615A0210	PRODUTUR RAJASURENDER	AB	
25	17QM5A0201	ANABARLAREKHA GMAIL COM	Ruf	Ruf
26	17QM5A0202	B RAVI TEJA	AB	
27	17QM5A0204	DASARI HARSHAVARDHAN		
28	17QM5A0205	DEVARAKONDA PAVAN SUBHASH	Pavan Subhash	Pavan Subhash
29	17QM5A0206	DHAGE HEMANTH	hemanth	hemanth
30	17QM5A0207	GADDE CHANDRA KANTH	Chandu	Chandu
31	17QM5A0208	K NITHIN KUMAR	AB	
32	17QM5A0210	KAITHI MOUNIKA	AB	

33	17QM5A0211	KASTURI TEJASRI		
34	17QM5A0212	MADUPATHI JAGADESHWAR		
35	17QM5A0213	MOHAMMED AFRITH		
36	17QM5A0215	NIMMALA DINESH		
37	17QM5A0216	PALLE DATTU		
38	17QM5A0217	PULAPALLY NANDESHWAR		
39	17QM5A0218	PULIPAKA VAMSHI RAJ	AB	
40	17QM5A0219	S SANTHOSH KUMAR	AB	

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M).
R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I **Academic Year 2019-20** **IV B.Tech**

Technical Training on PLC and SCADA

Date: 27–09 - 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session - II
1	16C51A0209	GUGULOTH BHAVANI	G.Bhavani	G.Bhavani
2	16QM1A0201	ABBARABOINA AKHIL	A. Akhil	A. Akhil
3	16QM1A0202	ADAMA POOJITHA	A. Poojitha	A. Poojitha
4	16QM1A0204	AKULA RAMYASRI	Ramya	Ramya
5	16QM1A0205	ANANTHARAM PRASHANTH	A. Prashanth	A. Prashanth
6	16QM1A0206	BEESA MAHESH KUMAR	Mahesh	Mahesh
7	16QM1A0207	BORAMPET SRIDHAR REDDY	AB	
8	16QM1A0209	JALAGARI RAJA SHEKAR RAJU	Shekhar	Shekhar
9	16QM1A0210	KAVALIPAVANI		
10	16QM1A0212	M L SATISH		
11	16QM1A0214	MOHAMED YUNUS M	M. Yunus	M. Yunus
12	16QM1A0215	MUDANGLA RAGHAVENDRA	M.Raj	M.Raj
13	16QM1A0216	N BHARGHAVI	Bhargavi	Bhargavi
14	16QM1A0217	PASUPULA NAVEEN YADAV	Nav	Nav
15	16QM1A0218	PODDUTURIPRAPUNREDDY	Prapun	Prapun
16	16QM1A0219	PUTTA ASHOK	P. Ashok	P. Ashok
17	16QM1A0221	RISHAB DEV RAI	AB	
18	16QM1A0222	VENKUGARI TEJASWINI	Tejaswini	Tejaswini
19	16QM1A0223	VUMMENTHALA SAIPRAVEEN REDDY		
20	16UR1A0201	M GNANESWAR REDDY	Gnaneshwar	Gnaneshwar
21	17615A0205	K.NAGAPRASANNA	K. Naga prasanna	K. Naga prasanna
22	17615A0207	K B VIKRAM NAIK	KB Vikram Naik	KB Vikram Naik
23	17615A0208	MALIPEDDI VEENA	Veena	Veena
24	17615A0210	PRODUTUR RAJASURENDER	AB	
25	17QM5A0201	ANABARLAREKHA GMAIL COM	Ry	Ry
26	17QM5A0202	B RAVI TEJA	AB	
27	17QM5A0204	DASARI HARSHAVARDHAN	Dasy	Dasy
28	17QM5A0205	DEVARAKONDA PAVAN SUBHASH	Pavan Subhash	Pavan Subhash
29	17QM5A0206	DHAGE HEMANTH	Hem	Hem
30	17QM5A0207	GADDE CHANDRA KANTH	Chandrakanth	Chandrakanth
31	17QM5A0208	K NITHIN KUMAR	AB	
32	17QM5A0210	K. Mounika	Mouni	Mouni

33	17QM5A0211	KASTURI TEJASRI		
34	17QM5A0212	MADUPATHI JAGADESHWAR		
35	17QM5A0213	MOHAMMED AFRITH		
36	17QM5A0215	NIMMALA DINESH		
37	17QM5A0216	PALLE DATTU		
38	17QM5A0217	PULAPALLY NANDESHWAR		
39	17QM5A0218	PULIPAKA VAMSHI RAJ		
40	17QM5A0219	S SANTHOSH KUMAR	AB	

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M).
R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I **Academic Year 2019-20** **IV B.Tech**

Technical Training on PLC and SCADA

Date: 28–09 - 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session - II
1	16C51A0209	GUGULOTH BHAVANI		
2	16QM1A0201	ABBARABOINA AKHIL	Akhil	Akhil
3	16QM1A0202	ADAMA POOJITHA		
4	16QM1A0204	AKULA RAMYASRI		
5	16QM1A0205	ANANTHARAM PRASHANTH	ABSENT	
6	16QM1A0206	BEESA MAHESH KUMAR		
7	16QM1A0207	BORAMPET SRIDHAR REDDY		
8	16QM1A0209	JALAGARI RAJA SHEKAR RAJU	Rajshekar Raju	Rajshekar Raju
9	16QM1A0210	KAVALIPAVANI		
10	16QM1A0212	M L SATISH	Satish	Satish
11	16QM1A0214	MOHAMED YUNUS M	M. Yunus	M. Yunus
12	16QM1A0215	MUDANGLA RAGHAVENDRA	Raghu	Raghu
13	16QM1A0216	N BHARGHAVI	N.B.	N.B.
14	16QM1A0217	PASUPULA NAVEEN YADAV	Naveen	Naveen
15	16QM1A0218	PODDUTURIPRAPUNREDDY	Prapun	Prapun
16	16QM1A0219	PUTTA ASHOK		
17	16QM1A0221	RISHAB DEV RAI	Rishab	Rishab
18	16QM1A0222	VENKUGARI TEJASWINI	Tejaswini	Tejaswini
19	16QM1A0223	VUMMENTHALA SAIPRAVEEN REDDY	Saipraveen	Saipraveen
20	16UR1A0201	M GNANESWAR REDDY	Gnaneswar	Gnaneswar
21	17615A0205	K.NAGAPRASANNA	Nagaprasanna	Nagaprasanna
22	17615A0207	K B VIKRAM NAIK	K.B. Vikram	K.B. Vikram
23	17615A0208	MALIPEDDI VEENA	Veena	Veena
24	17615A0210	PRODUTUR RAJASURENDER		
25	17QM5A0201	ANABARLAREKHA GMAIL COM	Anabarla	Anabarla
26	17QM5A0202	B RAVI TEJA	Teja	Teja
27	17QM5A0204	DASARI HARSHAVARDHAN	Dasari	Dasari
28	17QM5A0205	DEVARAKONDA PAVAN SUBHASH	Pavan Subhash	Pavan Subhash
29	17QM5A0206	DHAGE HEMANTH	Hemanth	Hemanth
30	17QM5A0207	GADDE CHANDRA KANTH	Chandra	Chandra
31	17QM5A0208	K NITHIN KUMAR		
	17QM5A0210	K. Mounika	Mounika	Mounika

17QM5A0210

33	17QM5A0211	KASTURI TEJASRI		
34	17QM5A0212	MADUPATHI JAGADESHWAR		
35	17QM5A0213	MOHAMMED AFRITH		
36	17QM5A0215	NIMMALA DINESH		
37	17QM5A0216	PALLE DATTU		
38	17QM5A0217	PULAPALLY NANDESHWAR		
39	17QM5A0218	PULIPAKA VAMSHI RAJ		
40	17QM5A0219	S SANTHOSH KUMAR		

HOD

Principal

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I | **Academic Year 2019-20** | **III B.Tech**

Technical Training on PLC and SCADA

Date:23 - 09 – 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session – II
1	17QM1A0201	A KARTHIK REDDY		
2	17QM1A0202	AHMED NAZAR		
3	17QM1A0204	AMAR CHANDESHWRE		
4	17QM1A0205	ARRAPAPULA SRINIKA		
5	17QM1A0206	BANOTHU VINEETH KUMAR		
6	17QM1A0207	BELLAM GOPI	← ABSENT →	
7	17QM1A0208	SK HATEEM AHMED		
8	17QM1A0209	CHINTHAKUNTLA ASWINI		
9	17QM1A0210	GORLA YOUGHANDER REDDY		
10	17QM1A0211	GANAPURAM SNEHA		
11	17QM1A0212	KANTAM KOTESHWARI		
12	17QM1A0213	MADI SHASHIVARDHAN REDDY		
13	17QM1A0214	SAI RITESH SINGH		
14	17QM1A0215	SAMA SUSHMA		
15	17QM5A0214	M GOVARDHAN		
16	18QM5A0201	ALGANI ABHILASH GOUD		
17	18QM5A0202	BASA TEJASWINI		
18	18QM5A0203	BONKURI SUCHARITHA		
19	18QM5A0204	CHENNA DIVYA		
20	18QM5A0205	CHITYALA MANIKANTA		
21	18QM5A0206	GALIPELLY RAM TEJA		
22	18QM5A0207	GANDRA RAKESH REDDY		
23	18QM5A0208	GUNTI SAILOKESH		
24	18QM5A0210	KALVAKUNTLA ABHIRAM		
25	18QM5A0211	K. KAMALAKAR GOUD		

26	18QM5A0212	KODEM SRAVANTHI		
27	18QM5A0214	M KAVITHA		
28	18QM5A0215	MAISA RAKESH		
29	18QM5A0216	P DIVYA		
30	18QM5A0217	PILLI PAVAN KUMAR		
31	18QM5A0218	PUPPALA RAJESH		
32	18QM5A0219	SUDHEESH PRASAD M		
33	18QM5A0220	SUNIL RATHOD	AB	
34	18QM5A0221	SUNKARI SAI SRIKAR		
35	18QM5A0222	TADAKAMALLA NAVEEN RAJ		
36	18QM5A0223	THALLAPELLY VINAY		
37	18QM5A0224	THUMMA SRINIVAS		
38	18QM5A0225	YAKARI KARTHIK KUMAR		
39	17H11A0201	IRSHAD ALI		
40	17H11A0202	SAMEERA NAAZ		
41	18H15A0201	MD. AFRID		
42	18H15A0202	MD. SOHAIL		

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M).
R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I **Academic Year 2019-20** **III B.Tech**

Technical Training on PLC and SCADA

Date:24 - 09 – 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session – II
1	17QM1A0201	A KARTHIK REDDY		
2	17QM1A0202	AHMED NAZAR		
3	17QM1A0204	AMAR CHANDESHWRE		
4	17QM1A0205	ARRAPAPULA SRINIKA		
5	17QM1A0206	BANOTHU VINEETH KUMAR		
6	17QM1A0207	BELLAM GOPI	← AB	→
7	17QM1A0208	SK HATEEM AHMED		
8	17QM1A0209	CHINTHAKUNTLA ASWINI		
9	17QM1A0210	GORLA YOUGHANDER REDDY		
10	17QM1A0211	GANAPURAM SNEHA		
11	17QM1A0212	KANTAM KOTESHWARI		
12	17QM1A0213	MADI SHASHIVARDHAN REDDY		
13	17QM1A0214	SAI RITESH SINGH		
14	17QM1A0215	SAMA SUSHMA		
15	17QM5A0214	M GOVARDHAN		
16	18QM5A0201	ALGANI ABHILASH GOUD		
17	18QM5A0202	BASA TEJASWINI		
18	18QM5A0203	BONKURI SUCHARITHA		
19	18QM5A0204	CHENNA DIVYA		
20	18QM5A0205	CHITYALA MANIKANTA		
21	18QM5A0206	GALIPELLY RAM TEJA		
22	18QM5A0207	GANDRA RAKESH REDDY	← ABSENT	→
23	18QM5A0208	GUNTI SAILOKESH		
24	18QM5A0210	KALVAKUNTLA ABHIRAM		
25	18QM5A0211	K. KAMALAKAR GOUD		

26	18QM5A0212	KODEM SRAVANTHI		
27	18QM5A0214	M KAVITHA		
28	18QM5A0215	MAISA RAKESH	AB	AB
29	18QM5A0216	P DIVYA		
30	18QM5A0217	PILLI PAVAN KUMAR		
31	18QM5A0218	PUPPALA RAJESH		
32	18QM5A0219	SUDHEESH PRASAD M		
33	18QM5A0220	SUNIL RATHOD	AB	AB
34	18QM5A0221	SUNKARI SAI SRIKAR		
35	18QM5A0222	TADAKAMALLA NAVEEN RAJ		
36	18QM5A0223	THALLAPELLY VINAY		
37	18QM5A0224	THUMMA SRINIVAS		
38	18QM5A0225	YAKARI KARTHIK KUMAR		
39	17H11A0201	IRSHAD ALI		
40	17H11A0202	SAMEERA NAAZ	AB	AB
41	18H15A0201	MD. AFRID		
42	18H15A0202	MD. SOHAIL	AB	AB

HOD

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M),
R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I | **Academic Year 2019-20** | **III B.Tech**

Technical Training on PLC and SCADA

Date: 26 - 09 – 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session – II
1	17QM1A0201	A KARTHIK REDDY		
2	17QM1A0202	AHMED NAZAR		
3	17QM1A0204	AMAR CHANDESHWRE		
4	17QM1A0205	ARRAPAPULA SRINIKA		
5	17QM1A0206	BANOTHU VINEETH KUMAR		
6	17QM1A0207	BELLAM GOPI	Absent	
7	17QM1A0208	SK HATEEM AHMED	AB	
8	17QM1A0209	CHINTHAKUNTLA ASWINI		
9	17QM1A0210	GORLA YOUGHANDER REDDY		
10	17QM1A0211	GANAPURAM SNEHA		
11	17QM1A0212	KANTAM KOTESHWARI		
12	17QM1A0213	MADI SHASHIVARDHAN REDDY		
13	17QM1A0214	SAI RITESH SINGH		
14	17QM1A0215	SAMA SUSHMA		
15	17QM5A0214	M GOVARDHAN		
16	18QM5A0201	ALGANI ABHILASH GOUD		
17	18QM5A0202	BASA TEJASWINI		
18	18QM5A0203	BONKURI SUCHARITHA		
19	18QM5A0204	CHENNA DIVYA		
20	18QM5A0205	CHITYALA MANIKANTA		
21	18QM5A0206	GALIPELLY RAM TEJA		
22	18QM5A0207	GANDRA RAKESH REDDY		
23	18QM5A0208	GUNTI SAILOKESH		
24	18QM5A0210	KALVAKUNTLA ABHIRAM		
25	18QM5A0211	K. KAMALAKAR GOUD		

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

26	18QM5A0212	KODEM SRAVANTHI		
27	18QM5A0214	M KAVITHA		
28	18QM5A0215	MAISA RAKESH		
29	18QM5A0216	P DIVYA		
30	18QM5A0217	PILLI PAVAN KUMAR		
31	18QM5A0218	PUPPALA RAJESH		
32	18QM5A0219	SUDHEESH PRASAD M		
33	18QM5A0220	SUNIL RATHOD		
34	18QM5A0221	SUNKARI SAI SRIKAR		
35	18QM5A0222	TADAKAMALLA NAVEEN RAJ		
36	18QM5A0223	THALLAPELLY VINAY		
37	18QM5A0224	THUMMA SRINIVAS		
38	18QM5A0225	YAKARI KARTHIK KUMAR		
39	17H11A0201	IRSHAD ALI		
40	17H11A0202	SAMEERA NAAZ		
41	18H15A0201	MD. AFRID		
42	18H15A0202	MD. SOHAIL		

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M),
R.R.Dist., Telangana.

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I | **Academic Year 2019-20** | **III B.Tech**

Technical Training on PLC and SCADA

Date: 27 - 09 – 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session – II
1	17QM1A0201	A KARTHIK REDDY		
2	17QM1A0202	AHMED NAZAR		
3	17QM1A0204	AMAR CHANDESHWRE		
4	17QM1A0205	ARRAPAPULA SRINIKA		
5	17QM1A0206	BANOTHU VINEETH KUMAR		
6	17QM1A0207	BELLAM GOPI		
7	17QM1A0208	SK HATEEM AHMED		
8	17QM1A0209	CHINTHAKUNTLA ASWINI		
9	17QM1A0210	GORLA YOUGHANDER REDDY		
10	17QM1A0211	GANAPURAM SNEHA		
11	17QM1A0212	KANTAM KOTESHWARI		
12	17QM1A0213	MADI SHASHIVARDHAN REDDY		
13	17QM1A0214	SAI RITESH SINGH		
14	17QM1A0215	SAMA SUSHMA		
15	17QM5A0214	M GOVARDHAN		
16	18QM5A0201	ALGANI ABHILASH GOUD		
17	18QM5A0202	BASA TEJASWINI		
18	18QM5A0203	BONKURI SUCHARITHA		
19	18QM5A0204	CHENNA DIVYA		
20	18QM5A0205	CHITYALA MANIKANTA		
21	18QM5A0206	GALIPELLY RAM TEJA		
22	18QM5A0207	GANDRA RAKESH REDDY		
23	18QM5A0208	GUNTI SAILOKESH		
24	18QM5A0210	KALVAKUNTLA ABHIRAM		
25	18QM5A0211	K. KAMALAKAR GOUD		

26	18QM5A0212	KODEM SRAVANTHI		
27	18QM5A0214	M KAVITHA		
28	18QM5A0215	MAISA RAKESH		
29	18QM5A0216	P DIVYA		
30	18QM5A0217	PILLI PAVAN KUMAR		
31	18QM5A0218	PUPPALA RAJESH		
32	18QM5A0219	SUDHEESH PRASAD M		
33	18QM5A0220	SUNIL RATHOD		
34	18QM5A0221	SUNKARI SAI SRIKAR		
35	18QM5A0222	TADAKAMALLA NAVEEN RAJ		
36	18QM5A0223	THALLAPELLY VINAY		
37	18QM5A0224	THUMMA SRINIVAS		
38	18QM5A0225	YAKARI KARTHIK KUMAR		
39	17H11A0201	IRSHAD ALI		
40	17H11A0202	SAMEERA NAAZ		
41	18H15A0201	MD. AFRID		
42	18H15A0202	MD. SOHAIL		

HOD

Principal

KG REDDY College of Engineering & Technology

KG Reddy College of Engineering & Technology

(Approved by AICTE, New Delhi, Affiliated to JNTUH, Hyderabad)
Chilkur (Village), Moinabad (Mandal), R. R Dist, TS-501504

Accredited By NAAC

Department of Electrical and Electronics Engineering

Semester: I **Academic Year 2019-20** **III B.Tech**

Technical Training on PLC and SCADA

Date: 28 - 09 – 2019

S. No	Roll No	Name of the Student	Signature of the Student	
			Session – I	Session – II
1	17QM1A0201	A KARTHIK REDDY		
2	17QM1A0202	AHMED NAZAR	Ahmad.	Ahmad.
3	17QM1A0204	AMAR CHANDESHWRE	Amar.	Amar.
4	17QM1A0205	ARRAPAPULA SRINIKA	Arj.	Arj.
5	17QM1A0206	BANOTHU VINEETH KUMAR	Vinith	Vinith.
6	17QM1A0207	BELLAM GOPI		
7	17QM1A0208	SK HATEEM AHMED	Hateem	Hateem.
8	17QM1A0209	CHINTHAKUNTLA ASWINI	Arj	Arj
9	17QM1A0210	GORLA YOUGHANDER REDDY	G. youghander	G. youghander
10	17QM1A0211	GANAPURAM SNEHA	Sneha	Sneha.
11	17QM1A0212	KANTAM KOTESHWARI	Koteshwary	Koteshwary.
12	17QM1A0213	MADI SHASHIVARDHAN REDDY	Shashi	Shashi
13	17QM1A0214	SAI RITESH SINGH	R Ritesh	R Ritesh.
14	17QM1A0215	SAMA SUSHMA	Sushma	Sushma
15	17QM5A0214	M GOVARDHAN		
16	18QM5A0201	ALGANI ABHILASH GOUD	A. Abhilash Goud	A. Abhilash Goud
17	18QM5A0202	BASA TEJASWINI	Teja	Teja
18	18QM5A0203	BONKURI SUCHARITHA	Suchi	Suchi
19	18QM5A0204	CHENNA DIVYA	divya	divya
20	18QM5A0205	CHITYALA MANIKANTA	Ch. Rajt	Ch. Rajt.
21	18QM5A0206	GALIPELLY RAM TEJA	Ramj	Ramj.
22	18QM5A0207	GANDRA RAKESH REDDY	Rakesh	Rakesh
23	18QM5A0208	GUNTI SAILOKESH	G. Sailokesh	G. Sailokesh
24	18QM5A0210	KALVAKUNTLA ABHIRAM	Arj.	Arj.
25	18OM5A0211	K. KAMALAKAR GOUD	K. Kamalakar Goud	K. Kamalakar Goud.

26	18QM5A0212	KODEM SRAVANTHI		
27	18QM5A0214	M KAVITHA		
28	18QM5A0215	MAISA RAKESH		
29	18QM5A0216	P DIVYA		
30	18QM5A0217	PILLI PAVAN KUMAR		
31	18QM5A0218	PUPPALA RAJESH		
32	18QM5A0219	SUDHEESH PRASAD M		
33	18QM5A0220	SUNIL RATHOD		
34	18QM5A0221	SUNKARI SAI SRIKAR		
35	18QM5A0222	TADAKAMALLA NAVEEN RAJ		
36	18QM5A0223	THALLAPELLY VINAY		
37	18QM5A0224	THUMMA SRINIVAS		
38	18QM5A0225	YAKARI KARTHIK KUMAR		
39	17H11A0201	IRSHAD ALI		
40	17H11A0202	SAMEERA NAAZ		
41	18H15A0201	MD. AFRID		
42	18H15A0202	MD. SOHAIL		

HOD

Principal

Principal
KG Reddy College of Engineering & Technology
Chilkur (V), Moinabad (M),
R.R.Dist, Telangana.

KG REDDY College of Engineering & Technology

Enrun India

CERTIFICATE COURSE
ON
INDUSTRIAL AUTOMATION USING PLC AND SCADA

25/30

OBJECTIVE QUESTION PAPER

Each question carries two marks 18C51A0209 **Total marks 60**

1. PLC is an acronym of _____ Logic Controller [B]
A. Programmable B. Peripheral C. Periodic D. Pneumatic

2. Unitary PLC has 20 inputs and _____ outputs [A]
A. 20 B. 18 C. 12 D. 10

3. Ladder Logic Programming consists primarily of [B]
A. logic gate symbol and connecting lines B. virtual relay contacts and coils
C. function blocks and connecting lines D. text-based codes

4. PLCs having less than _____ inputs and outputs are called as Small PLC [A]
A. 50 B. 100 C. 150 D. 200

5. In a PLC, scan time refers to the amount of time in which [C]
A. timer and counters are indexed by B. One rung of ladder logic takes to get complete
C. the entire program takes to execute D. the technician enters the program

6. HMI means _____ Machine Interface [A]
A. Human B. Hard C. Heart D. High

7. Medium PLC has _____ inputs and outputs [A]
A. 100 – 200 B. 1000 – 4000 C. 2000 – 4000 D. 4000 – 8000

8. Main difference between online and offline PLC programming is [B]
A. where the edited program resides B. whether the programming PC has internet connectivity
C. whether the PLC is running or stopped D. the type of program used

9. _____ language can be programmed interactively with the PLC [A]
A. Online B. Offline C. Basic D. C

10. For a 16-bit register, which is the largest integer number a PLC counter function can reach [B]
A. 32,768 B. 65,535 C. 65,536 D. 32,767

11. To protect a PLC from any incoming surges from the field, an isolated device such as _____ is used. [B]
A. Transformer B. Transducer C. ADC D. DAC

KG REDDY College of Engineering & Technology

Enrun India

12. In PLC programming, a retentive function is one that [A]
A. Default points to the On State B. Default points to the Off State
C. is not reset after a power cycle D. cannot be edited or deleted

13. An OR function implemented in Ladder logic uses [C]
A. normally closed contacts in series B. normally open contacts in series
C. normally closed contacts in parallel D. normally open contacts in parallel

14. A good application for a timed interrupt in a PLC program would be [B]
A. A math function block B. A PID function block
C. A communication function block D. A motor start/stop rung

15. The _____ instruction is used to turn an output ON or OFF after its time has been on for a preset time interval [A]
A. retentive time B. timer and delay C. timer off delay D. none of these

16. A _____consists of high speed, unidirectional digital communication channel (e.g. fiber optics link, twisted-wire pair, etc.) which's arranged as a closed loop or ring microcomputers are attached to the ring by ring interface units. [C]
A) All the Answers B) Ring system C) Hierarchical system D) Shared bus systems

17. A SCADA system performs Data acquisition, Networked data communication, _____ and Control. [A]
A) Analog to Digital Conversion B) 4-20mA to HART
C) All the Answers D) Data representation

18. Sensors and control relays can't generate or interpret protocol communication; _____ is needed to provide an interface between the sensors and the SCADA network. [A]
A) Remote Terminal Units (RTUs) B) All of the Answers
C) Field Instruments D) HMI

19. A central host computer server or servers called _____ [B]
A) Switch B) Master Terminal Units (MTUs) C) Junction Box D) Microcontroller

20. A collection of standard and/or custom software systems used to provide the SCADA central host and operator terminal application, support the communications system, and monitor and control remotely located field data interface devices called as _____ [A]
A) HART Protocol B) Human Machine Interface (HMI)
C) Input Output Modules D) Network Gateway

21. Combine communications paths to and from many RTUs into a single bit stream, usually using time division multiplexing (TDM) or other such bit stream manipulation techniques. [A]
A) Human Machine Interface (HMI) B) Multiplexers C) Barrier D) PLC

22. SCADA systems encompass the transfer of data between a central host computer and a number of _____and/or Programmable Logic Controllers (PLCs), and the central host and the operator terminals. [B]
A) Microcontrollers B) Remote Terminal Units (RTUs)

C) Input Output Modules D) Motor Control Center

23. _____ may employ one or more workstations and can be configured at the workstation or by an off-line personal computer. [D]
A) RTU B) Router C) DCSD) Gate Way

24. A _____ consists of number of minicomputers or microcomputers inter connected in a tree structure. [D]
A) All the Answers B) Hierarchical system C) Shared bus systems D) Ring system

25. In _____the connected processors communicated over a common channel using time-sharing, thus allowing attached computers to transmit information in short-duration, high speed bursts. [A]

A) Ring system B) All the Answers C) Shared bus systems D) Hierarchical system

26. In PLC programming, a retentive function is one that [B]
(A) Defaults to the "on" state (B) Comes last in the program
(C) Defaults to the "off" state (D) Is not reset after a power cycle

27. What are the main functions of control gear? [A]
(A) To provide a means of starting and stopping the motor and, at the same time, of limiting the starting current if required.
(B) To give adequate protection to the motor under all conditions.
(C) To allow speed changing when required.
(D) To provide means of braking the motor when required.

28. What devices are required to give adequate protection to the motor? [B]
(A) Under-voltage release to prevent automatic restarting after a stoppage due to a drop in voltage or failure of the supply, where unexpected restarting of the motor might cause injury to an operator.
(B) Overload relays for protection against excessive current in the motor windings – e.g. in the event of overload or failure of the motor. (C) Earth fault. (D) Single phase protection.

29. Identify the problem in this motor control PLC program: [C]
(A)Coil (B) Start contact (C) Seal-in contact (D) Stop contact

30. The Boolean representation of this PLC program is: [D]
(A) ABC + D (B) C + (A + B) D (C) C + D (A + B) (D) C (AB + D)

KG REDDY College of Engineering & Technology

Moinabad Hyderabad-500075

NAAC Accredition

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATION COURSE

ON

"Industrial Automation using PLC & SCADA"

(In Association with ENRUN INDIA, Hyderabad)

on 23rd September - 30th September 2019

Certificate of Passing

This is to certify that Mr. / Ms. THALLAPELLY VINAY (18QM5A0223) has a Passed in Certificate Course on **"Industrial Automation Using PLC & SCADA"** from on **23rd September - 30th September 2019** organised by Department of Electrical & Electronics Engineering, KG Reddy College of Engineering & Technology, Moinabad, Hyderabad.

Managing Director
(Enrun, India)

Convener & HOD

Principal

Scanned by CamScanner

KG REDDY College of Engineering & Technology

Moinabad Hyderabad-500075

NAAC Accredition

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

CERTIFICATION COURSE

ON

"Industrial Automation using PLC & SCADA"

(In Association with ENRUN INDIA, Hyderabad)

on 23rd September - 30th September 2019

Certificate of Passing

This is to certify that Mr. / Ms. YAKARI KARTHIK KUMAR (18QM5A0225) has a Passed in Certificate Course on **"Industrial Automation Using PLC & SCADA"** from on **23rd September - 30th September 2019** organised by Department of Electrical & Electronics Engineering, KG Reddy College of Engineering & Technology, Moinabad, Hyderabad .

Managing Director ***(Enrun, India)***	***Convener & HOD***	***Principal***

Scanned by CamScanner