

1 yr certificate course
all groups 18-19



**DR. BRR GOVERNMENT DEGREE
COLLEGE JADCHERLA**

DEPARTMENT OF PHYSICS

CERTIFICATE COURSE

In

**ELECTRICAL CIRCUIT
NETWORKING**



**DR. BRR GOVERNMENT DEGREE
COLLEGE JADCHERLA
DEPARTMENT OF PHYSICS**

CERTIFICATE COURSE

In

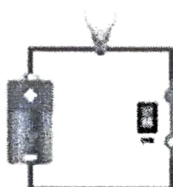
ELECTRICAL CIRCUIT NETWORKING

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**DR. BRR GOVERNMENT DEGREE COLLEGE
JADCHERLA**

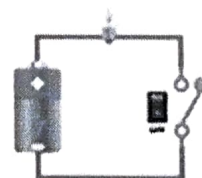
DEPARTMENT OF PHYSICS



Cordially Invite You

To


Inauguration Program of



Certificate Course in "ELECTRICAL CIRCUIT NETWORKING"

11-07-2018 -11.30 AM

**Organized By
DEPT.OF PHYSICS**


INCHARGE
Department of Physics
Dr.BRR Govt. College
Jadcherla-509 301

To
The Principal,
Dr. BRR Govt. College,
Jadcherla
Respected Sir,

Date: 09-07-2018

Sub: Organizing of Certificate Course on the topic
"Electrical Circuit Networking" for- B.A/ B.Com/ B.Sc
Students- Req-Reg.

Adverting to the subject cited above department of physics is going to organize a
Certificate Course on the topic "Electrical Circuit Networking, which is useful to students
in their daily life and job oriented course.

So, We request you to kindly permit us to conduct this course .

Thanking you Sir,

HOD




INCHARGE
Department of Physics
Dr.BRR Govt. College
Jadcherla-509 301



PRINCIPAL
Principal
Dr BRR Govt. Collie,
Jadcherla-509 301

Members

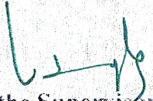
1. Sri. B. Uday Kumar, Asst. Prof. of Physics
2. Smt. K. Manjula, Asst. Prof. of Physics 
3. Sri. A. Keshaverdhan Goud, C-Lecturer

**DR .BRR GOVERNMENT DEGREE COLLGE,
JADCHERLA
DEPARTMENT OF PHYSICS
STUDY PROJECT
2021-22**


Title : AUTOMATIC STREET LIGHT

Submitted by:

S.No	Name of the student	H.T.No	Group
1	ASRA TABASSUM	19033006441004	MPC EM III Year
2	KATRAVATH KAVITHA	19033006441015	MPC EM III Year
3	KOMMU PARVATHALU	19033006441016	MPC EM III Year
4	PADALA SANDHYA	19033006441521	MPC TM III Year
5	KONYALA NAVYA	19033006468017	MPCS EM- III Year
6	ASRA TABASSUM	19033006441004	MPC EM III Year


Name of the Supervisor

B. Uday Kumar, Asst. Professor of Physics and HOD



Principal


PRINCIPAL
Dr.B.R.R. Government Degree College
Jadcherla


ACKNOWLEDGEMENT

We wish to express our sincere thanks to B. Uday Kumar, Assistant professor of physics & HOD of the Department, DR.BRR GOVERNMENT DEGREE COLLEGE, and JADCHERLA, Project guide, for his kind help, personal interest, suggestions and Inspiring Guidance through the project. We are expressing our thanks from bottom of our hearts to K. Manjula Assistant professor of physics who always motivates, encourages us in tuning and updating ourselves according to society changes.

It is pleasure to have the opportunity to extend our gratitude towards all the faculty members in the department of PHYSICS, who helped right from the collection of study material to complete the project, and thankful to all those who helped in making the project successful. We would like to express our deepest gratitude to Smt. Dr. Ch. Appiya Chinnamma, Principal, DR.BRR GOVT. DEGREE COLLEGE, JADCHERLA for her support in carrying out this project


Head of the department
Department of Physics
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Principal
PRINCIPAL
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Jadcherla


Project Supervisor

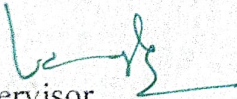
CERTIFICATE

This is certify to that, the project work entitled "Automatic street Light "
is bonafide work done by

Participant's names

S.No	Name of the student	Ht. No	Group
1	ASRA TABASSUM	19033006441004	MPC EM III Year
2	KATRAVATHI KAVITHA	19033006441015	MPC EM III Year
3	KOMMU PARVATHAI U	19033006441016	MPC EM III Year
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5	KONYALA NAVYA	19033006468017	MPCS EM- III Year
6	ASRA TABASSUM	19033006441004	MPC EM III Year

The result embedded in this work has not been submitted to any other
university or institute for the award of any degree.


Supervisor

B.Uday Kumar, Asst. Professor of Physics and HOD


Principal

Dr. Ch. Appiya Chinnamma

Contents:

1. Introduction-
2. Statement of the problem
3. Materials and methodology
4. Working
5. Advantages
6. Disadvantages
7. Conclusions

I. Introduction:

In present days energy saving is valuable asset. Solar energy is absolutely free which is a renewable resource for generating electricity. Smart Street light is a robotized frame work which automates the road. The primary point of Smart Street light is to reduce the power utilization when there are no vehicle moments on road. The Smart road light will turn to be ON when there are vehicles out and about generally the lights will be turned OFF. An automatic street light glows when a vehicle is present nearby, and it shuts down when there is no traffic. We can control the street lights through manually, but it is a time taken and also time lagging chances are there so, the process was lagging due to this. So this is the project i.e. The Electronic Street light.

II. Statement of the Problem:

The Electronic Street Light System has the provision to control the street lighting/yard lighting or quarry lighting system automatically as per the timings programmed in the system and the programs can be modified automatically throughout the year as per the seasonal changes which is an already programmed in the system by using RTC (Real Time Clock) . By using of a LDR, we can control the lightning system with the help of its sensor. RTC is a computer clock which is in the form of an integrated circuit that keeps track of the current time. Although the term often refers to the devices in personal computers, servers and embedded systems, RTCs are present in almost any electronic device which needs to keep accurate time. LDR is a light dependent resister whose resistance varies with light. Its resistance decreases with increase in light. Thus it senses the light and it switches on the lightning system when there is no light.

Materials :

The essential electronic components used are:

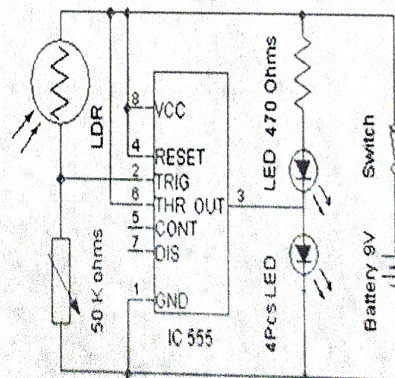
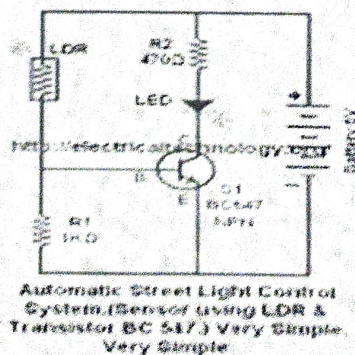
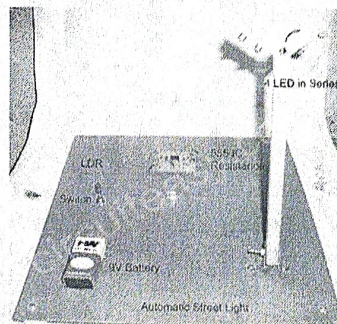
- i). Transistor.
- ii). P.C.B .Printed Circuit Board of 555 or Vero board.
- iv). Switch and battery.
- v). 9v Battery with strip
- vi). Switch
- iii). L.D.R (Light Depending Resistance)
- iv). IC NE555 with Base
- v). L.E.D (Light Emitting Diode) 5 pieces. (If using white color then 4 Pcs)
- vi). Variable Resistance of 47 K Ω

Tools:

The tools required for the construction are solder iron, solder wire, and wire stripper.

iii. Materials and methodology:

First of all, solder the transistors onto the printed circuit board. Connect the emitter pin of both the transistors to the negative terminal of the battery holder. Now, connect the collector pin of transistor-1 to the base pin of transistor-2. Connect a resistor between the positive terminal of the battery and the collector pin of transistor-1. Finally, connect the light-dependent resistor between the base pin of transistor-1 and the positive terminal of the battery clip. Complete the rest of the circuit as per the circuit diagram. Connect a resistor between the base pin of transistor-1 and the negative terminal of the battery. Now, connect another resistor between the positive terminal of the battery and the anode pin of the LED. Finally, connect the cathode terminal of LED to the collector pin of transistor-2. Attach the circuit to a model of a street in such a way that the LDR has enough exposure and the LEDs are fixed in place.



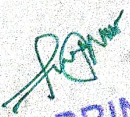
Application of Automatic Solar Street Lights:

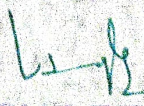
- Application of automatic solar street light systems is fast growing in popularity throughout the world. These have proved to be inexpensive means of lighting up roads & which are also sustainable & eco-friendly. Automatic street light systems have several applications because of their beneficial characteristics.
- **Government Units & Municipalities** – Government organizations can save large sums of money by using an automatic solar street light system for outdoor lighting. It is forecasted that we will have 359 million street lights by 2026.
- **Corporate & Big Businesses** – Many companies nowadays are applying green energy technologies & practices to reduce their carbon footprint. Installing automatic street light system can prove to be a step in this direction.
- **Great Way to Light Up Streets** – Apart from lighting up streets automatic solar street light system along with CCTV can also provide us additional security. Smart solar street lights are wireless & one of the street lighting solutions.
- **Along Roads & Highways** – High-quality automatic street light systems can enhance night-time visibility on rural roads, main roads & highways. These are also very easy to install & are affordably priced.
- **Parks & Recreational Areas** – Areas which are mainly donned by children can make good use of automatic street light systems. They are safe & secure & provide uniform lighting & the right amount of luminosity to parks.
- **Schools & Universities** – Automatic solar street light system is an excellent choice for schools, colleges & universities. With plenty of accessible areas, ranging from bus shelters to parking lots institutions can install them throughout the campus.

Future Scope of Automatic Solar Street Lights:

With the advancement in science & technology future scope of automatic solar street lights is very bright. Demand for power affects human life in many ways. It is not only important but essential to find ways to conserve power in order to prevent exhausting resources. Switching to a smart automatic street light system will also reduce power wastage which conventional street lights are known to do.

“ Today’s Energy saving is a precious asset for Tomorrow”


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