



## GOVERNMENT DEGREE COLLEGE::PATTIKONDA

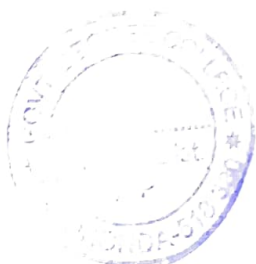
### THE INSTITUTION HAS DISABLED-FRIENDLY BARRIER FREE ENVIRONMENT

The main objectives of the "Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1996 enacted by the Government of India on January 1, 1996 are to create barrier free environment for persons with disabilities and to make special provisions for the Integration of persons with disabilities into the social mainstream.

Chapter VII of the Act, Sections 44 to 46 deal with non-discrimination in transport on the roads and in the built environment. It enjoins upon the governments and local authorities to ensure within their economic capacity provision for installation of kerb and slopes to be made in pavements for the easy access of wheel chair users, devising appropriate symbols of disability and warning signals at appropriate places.

In regard to non-discrimination in the built environment, provisions have been made in this Act for ramps in public buildings, adaptation of toilets for wheel chair users. In order to create a barrier free environment in consonance with the provisions of the Act, the Government of India (Ministry of Urban Affairs & Employment) is currently engaged in the process of amending/modifying the existing building bye-laws which would be applicable to all buildings and facilities used by the public.

The institution has Disabled Friendly Barrier free environment. The institution has arranged Ramps, Wheel Chairs and installed Bio-Metric Machine at lower level for the convenience of physically handicapped staff and students also.



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## GOVERNMENT DEGREE COLLEGE::PATTIKONDA

### PREAMBLE

A green campus place where environmental friendly practices and education combined to promote sustainable and eco-friendly practices in the campus. The green campus concept offers an institution the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of the mankind.


Greening the campus is all about sweeping away wasteful in efficiency is and using conventional sources energies for its daily power needs, correct disposal handling purchase of environment friendly supplies and effective recycling programme. Institute has to work out the time bound strategies to implement green campus initiatives. These strategies need to be incorporated in to the institutional planning and budgeting processes with the aim of developing a clean and green campus.

### Major Green Campus Initiatives:

- Rain water Harvesting
- Institute community garden
- Use of LED
- Restricted entry of vehicles
- Restricted parking
- Pedestrian friendly road
- Partial paperless office
- Plastic free campus
- Plantation



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## CHAPTER-2: INTRODUCTION TO THE CRITERION

A Green Campus is a place where environmental-friendly practices and education combine to achieve sustainable development. The institution implements eco-friendly practices in the campus. The green campus concept offers the opportunity to take the lead in redefining its environmental culture and developing new paradigms by creating sustainable solutions to environmental, social and economic needs of the mankind. In Government Degree College, Pattikonda, we practise and implement the following criteria by formulating policies to make it a pollution free, energy saving green campus.

### 2.1 GREEN CAMPUS POLICY

#### 1. Restricted entry of vehicles

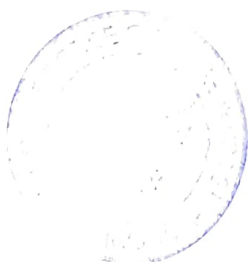
The college encourages the employees and students to frequently use public transport, bicycles, etc. to limit the emissions.


#### 2. Ban on use of Plastic

- The college continuously committed to work towards plastic-free campus.
- In the Govt. Degree College, Pattikonda campus there is complete ban on single-use plastics in classroom, labs and canteen in the institution's premises.

#### 3. Landscaping with trees and plants

- As per the green practices in the campus, GDC, Pattikonda is moving in the direction of a Green Institution by planting more saplings within and outside the campus.
- Medicinal plants and more fruit yielding plants have been grown to clean the environment.




  
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## 2.2 BENEFITS OF THE GREEN-CAMPUS

Benefits to the Environmental	Benefits to Institute
<ul style="list-style-type: none"> <li>• Environmental impacts of the Campus are quantified</li> <li>• Improves waste management</li> <li>• Decreases resource use</li> <li>• Improves management of environmental aspects</li> </ul>	<ul style="list-style-type: none"> <li>• Forum for college Principal academic Staff and students to meet</li> <li>• Creates a more balanced campus community</li> <li>• Empowers students and staff. Encourages innovation and change Prevents and reduces environmental impacts</li> <li>• Reduces associated costs good publicity</li> </ul>
Benefits to Students and Learning	Benefits to Local and Wider Community
<ul style="list-style-type: none"> <li>• Improves learning outcomes Research skills (developing an action plan, Transferable skills to workplace: unity communication, teamwork, unity servicing)</li> <li>• Introduction to new topics Curriculum links: using data currently generated, investigative research, problem based research</li> <li>• Institute becomes a better neighbor</li> </ul>	<ul style="list-style-type: none"> <li>• Sets an example in the locality</li> <li>• Involves local groups and representatives</li> <li>• Facilitation</li> <li>• Green Home</li> <li>• Greening Communities</li> <li>• Reduces waste generated, travel impacts etc. in the community</li> </ul>



  
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### INTRODUCTION TO SOLAR ENERGY

The sun drives 99.99% of the world's energy supply, including thermal photovoltaic, photochemical, photo biological and hybrid solar, hydro, wind, wave, and biomass energy conversion. It originally grew the biomass that we now access as fossil fuels. Other sources include tidal, geo-thermal and nuclear. The sun's energy comes from fusion reactions in its core. These actions have burning for 4.5 billion years and are expected to continue for another 6.5 billion years. The total power radiated out into space by the sun is about  $3.86 \times 10^{26}$  Watt. Since the sun is approximately  $1.5 \times 10^{11}$  m from the earth, and be that is about  $6.3 \times 10^6$  m in radius, intercepts only 0.000000045% of this power. This still amounts to a massive  $1.75 \times 10^{17}$  W. Most of this radiation is in the visible and infrared part of the electromagnetic spectrum, with is than 1% emitted in the radio, UV and X-ray spectral bands. The sun's electromagnetic radiation approximate that of a black body with a temperature around  $5778^0$  K, with its peak in the yellow range of the visible spectrum. This is sometimes rounded up to  $6000^0$  K for simplicity.

The solar radiation that reaches the earth is reduced in intensity and the spectrum is changed by absorption and scattering as it passes through the atmosphere, and by reflection from the surface.



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### WATER CONSERVATION FACILITIES AVAILABLE IN THE INSTITUTION

Conserving water reduces wear and tear on major resources such as water and waste water treatment plants and the distribution systems that deliver water to the public. Using less water can also enable us to become more flexible during times when there is a water shortage.

Conservation of water refers to the preservation, control, development and management of water and its resources. It is the strategies and activities made to manage fresh water and protect the water environment.

The institution has water harvesting pits before rains and after rains (filled with water). Its latitude is  $15.399457^{\circ}$  and longitude is  $77.499124^{\circ}$ . These r harvesting pits in the college help to increase the ground water level abundantly. The water level in the ground increases and it helps for the cultivation as well as drinking water purpose. The college has taken all measures to increase the conservation facilities in the college.

A canal was dug in the college North-East corner which helps for the rain water to flow and store in the college pits. This water is used to plant several small trees in the campus and also helps for the college staff and also outsiders near the college.



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7.1.2 - GREEN CAMPUS INITIATIVES INCLUDE:

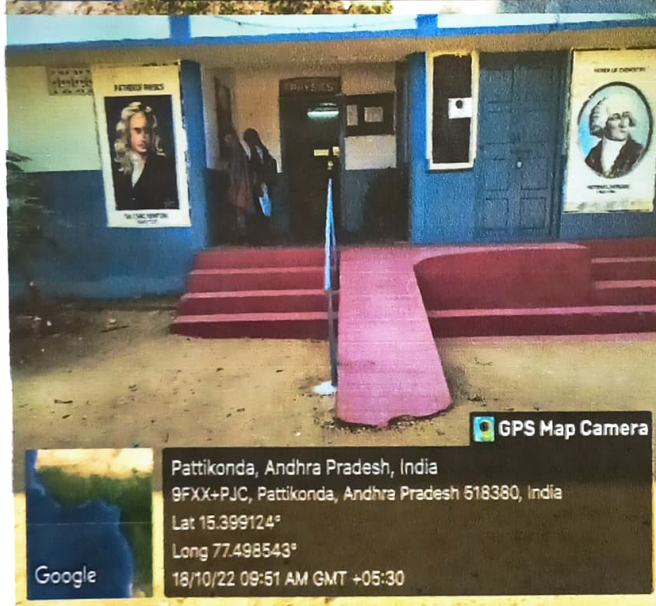
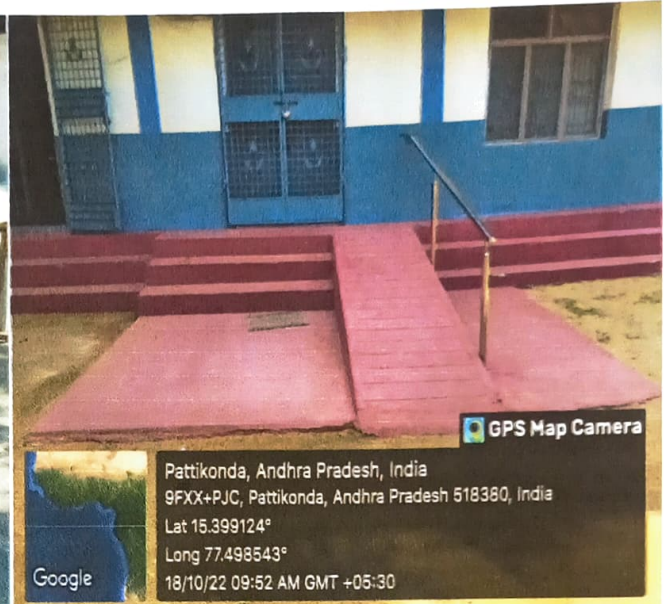
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GREEN CAMPUS INITIATIVES



## Ramps and Bar Handles for the use of Physically Challenged Persons



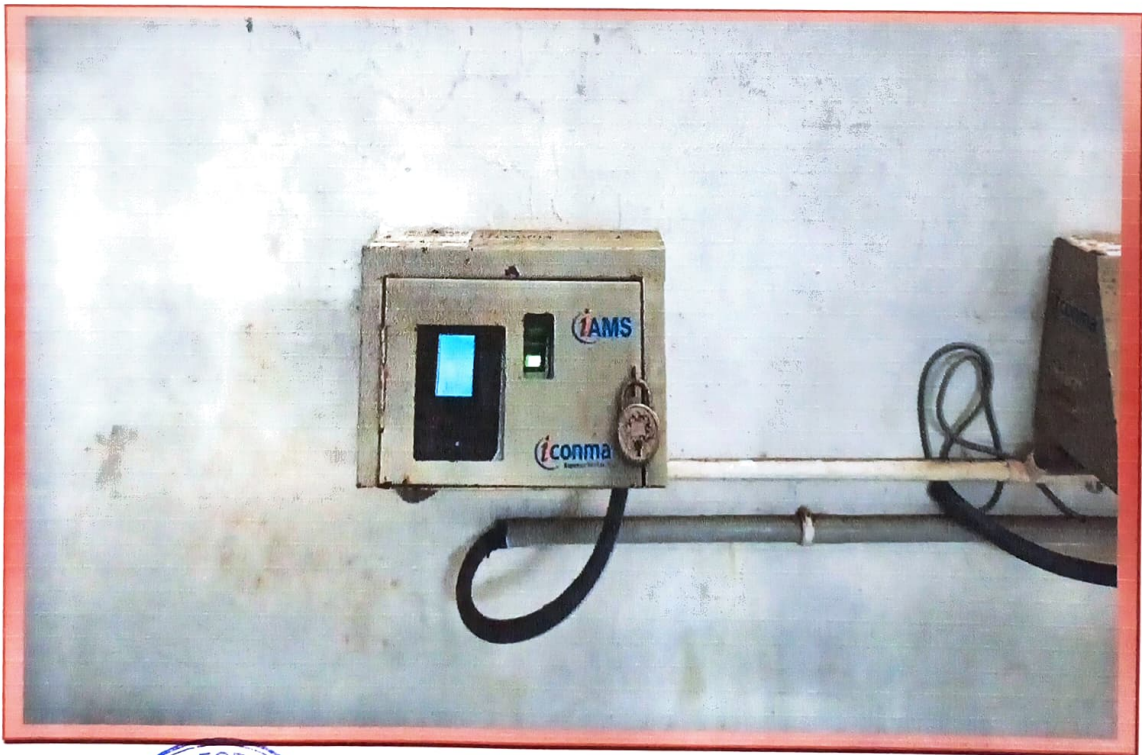
  
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## Try-Cycle for Disabled Students



## Bio-Metric Machine

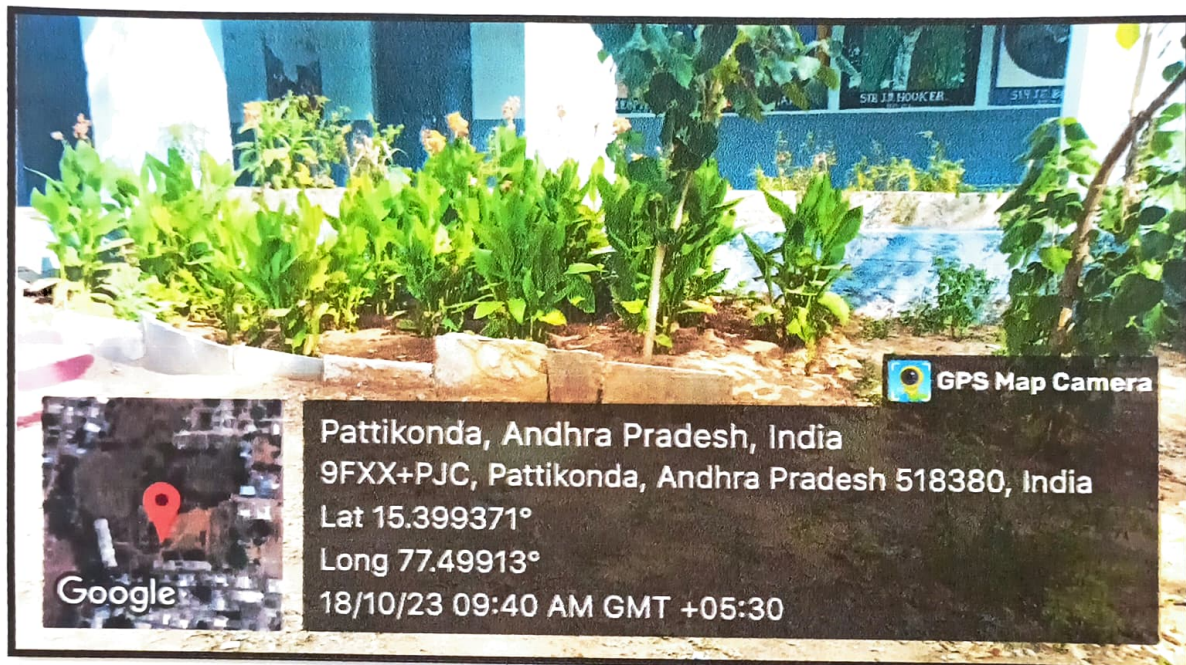


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## Lush Green Institute Garden

Green Landscaping with Trees and Plants—the campus is beautifully landscaped and has received appreciation. Plantation of around 200 plants has been done including a number of exotic plants. An active ECO club ensures the organization of tree plantation on World Environment Day, various awareness programs were & events conducted every year.



  
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## RAIN WATER HARVESTING

Water scarcity is serious problem throughout the world for both urban & rural community. Urbanization, industrial development & increase in agricultural field & production have resulted in over exploitation of groundwater & surface water resources and resultant deterioration in water quality. The conventional water sources namely well, river and reservoirs, etc. are inadequate to fulfill water demand due to unbalanced rainfall. While the rain water harvesting system investigate a new water source.

In Government Degree College, Pattikonda campus a rain water harvesting system is made. The runoff water from the nearby fields channelized into a recharge well located near the North-East corner of the campus. The runoff from this unpaved area is intercepted at a collection trench. From here the run off eventually rains into an abandoned open well, which facilitates ground water recharge.

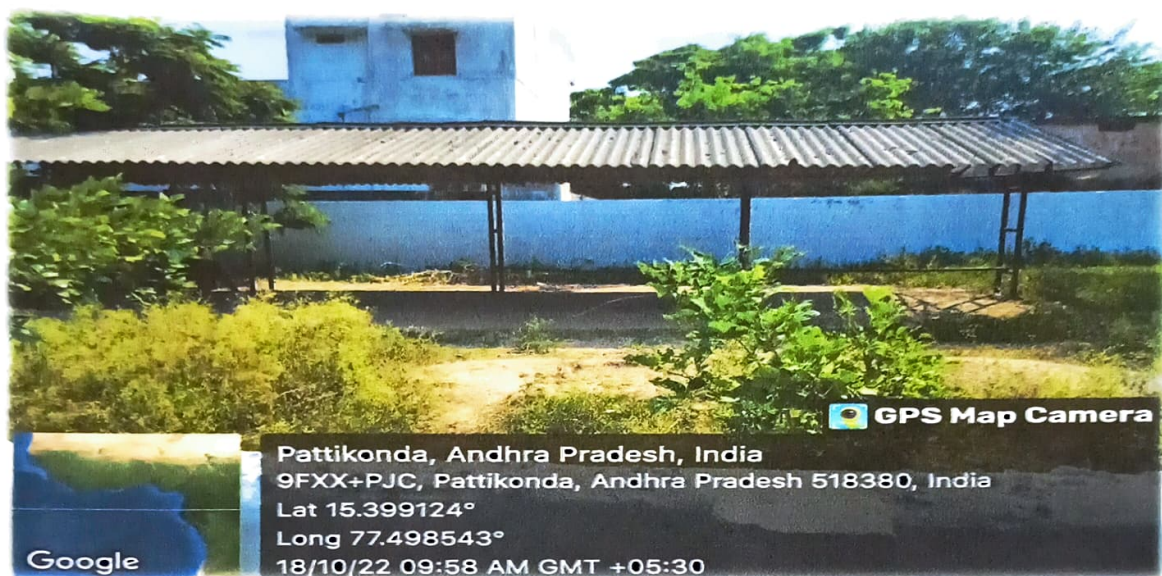


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## RESTRICTED ENTRY OF VEHICLES AND PARKING

In GDC Pattikonda campus, entry of private vehicles is restricted to keep the campus clean and green.



  
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## USE OF SOLAR ENERGY

The College uses solar energy to meet its power needs



## USE OF LED REPLACED BY TUBE LIGHTS AND INCANDICENT LIGHTS

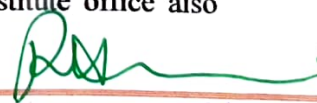
As a step towards energy saving, total lightings of class rooms, labs and hostel are replaced with LED panels. The outcomes of LED lights areas given below:-

- Long life. The components of an LED and the way that they generate light significantly extend the life span of the bulbs....
- Energy efficiency....
- High brightness and intensity....
- Exceptional color range....
- Low radiated heat....
- Reliability....
- Directional lighting.

### PARTIAL PAPER LESS OFFICE

All offices works are partially done on paperless concept. Information through mail, Google groups, What's App Groups, Google classrooms, etc. as much as possible. High speed Wi-Fi facility is also provided for this. Other practices like, re-use of one-sided paper for notes, sketches, rough work, rough printouts, etc.; cashless transactions, and utilizing multiuser printer at central administrative locations of the Institute office also aims at reducing the use of papers.

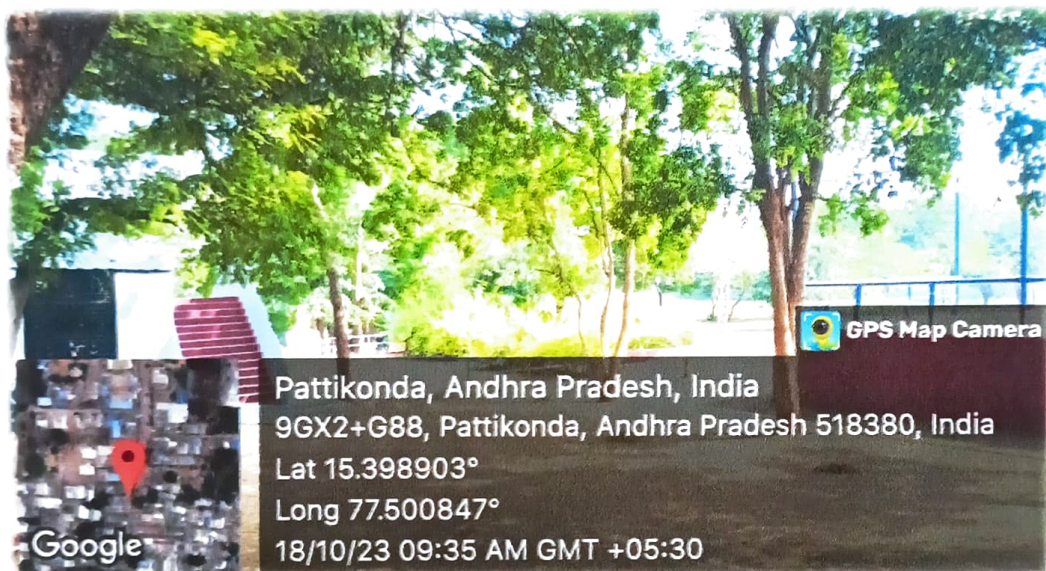


  
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## PLANTATION OF SHADY TREES AND MEDICINAL PLANTS

The campus is beautifully landscaped. Plantation of around 1000 plants has been done including a number of medicinal plants. An active Botanical club ensures the organization of tree plantation on World Environment Day, College level Greenery awareness programs & events every year. A rich variety of flora and fauna predominates the natural landscape of the campus. Medicinal trees and Plants are also planted in the campus.-

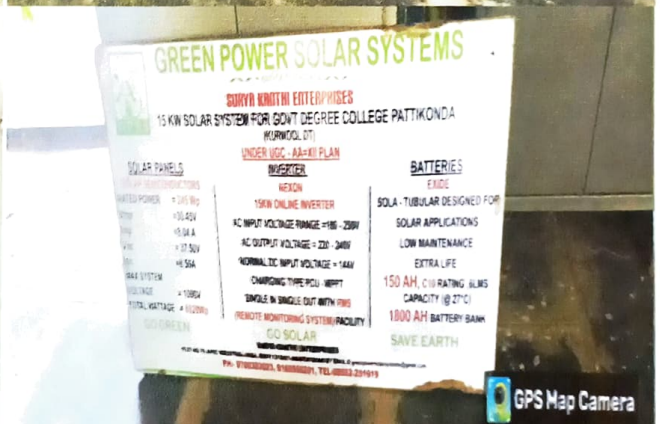
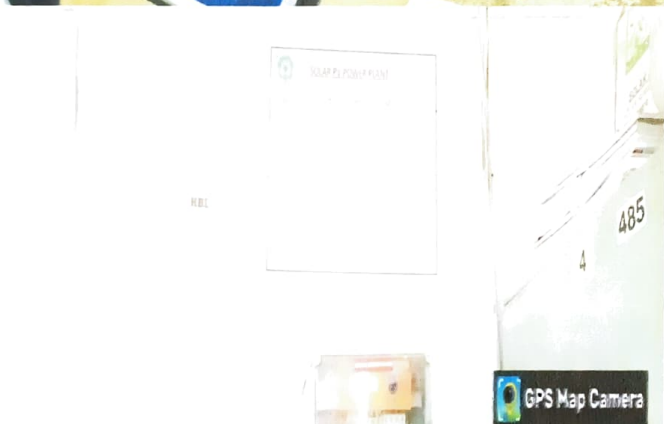



  
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## Installation in the College

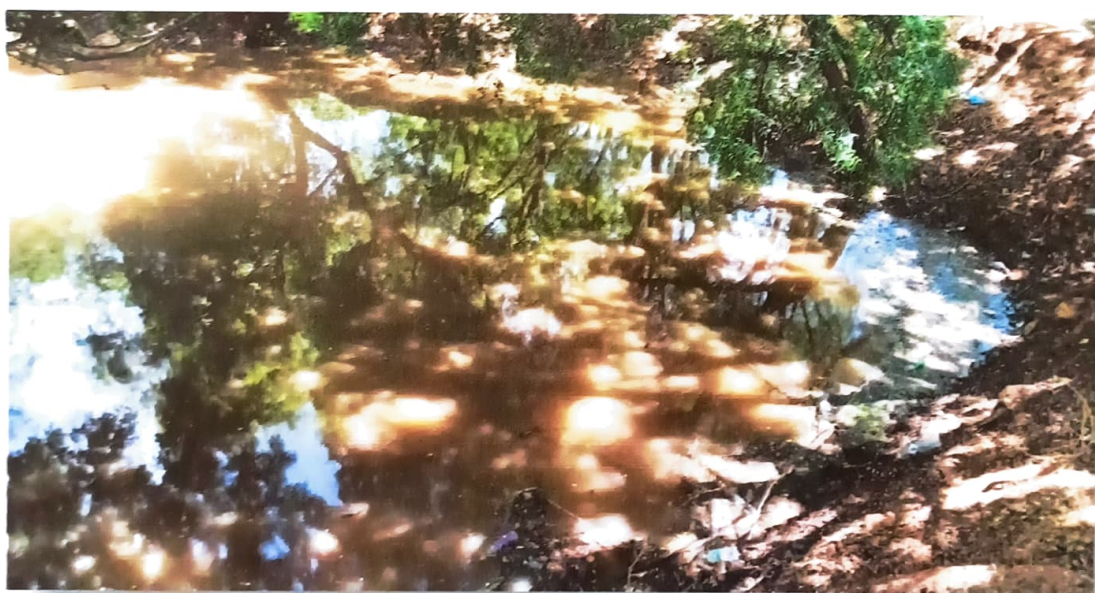
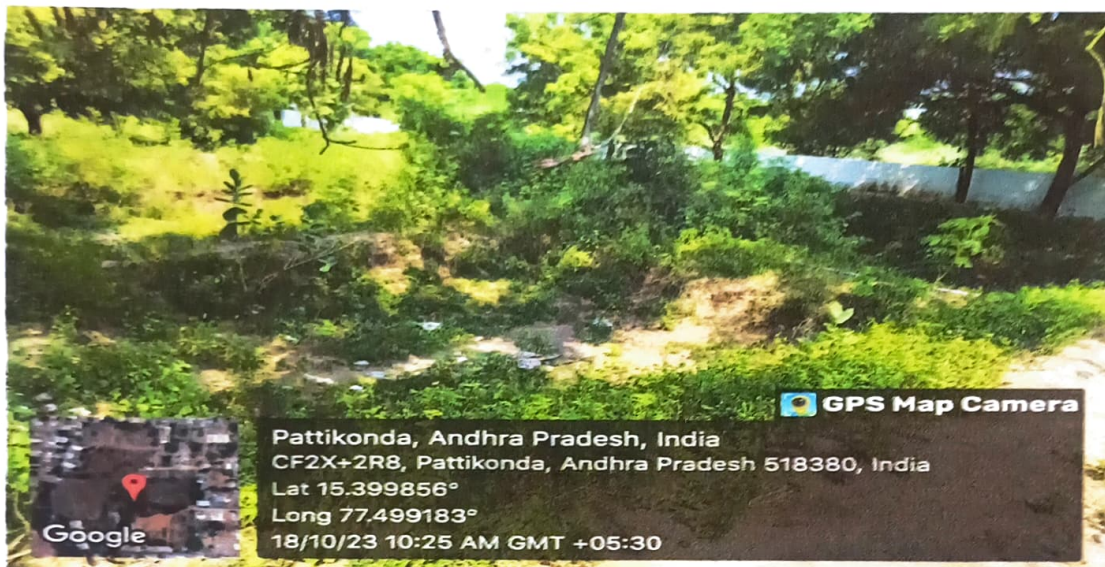
Solar Energy system started in this college in 2017 and the entire college is equipped with this solar system. It is helpful in saving power bills and also very economical. The supply is given to all the Principal Chamber, Departments, Staff Rooms, Auditorium, college office and Class Rooms.



  
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## Before and After Rainy season



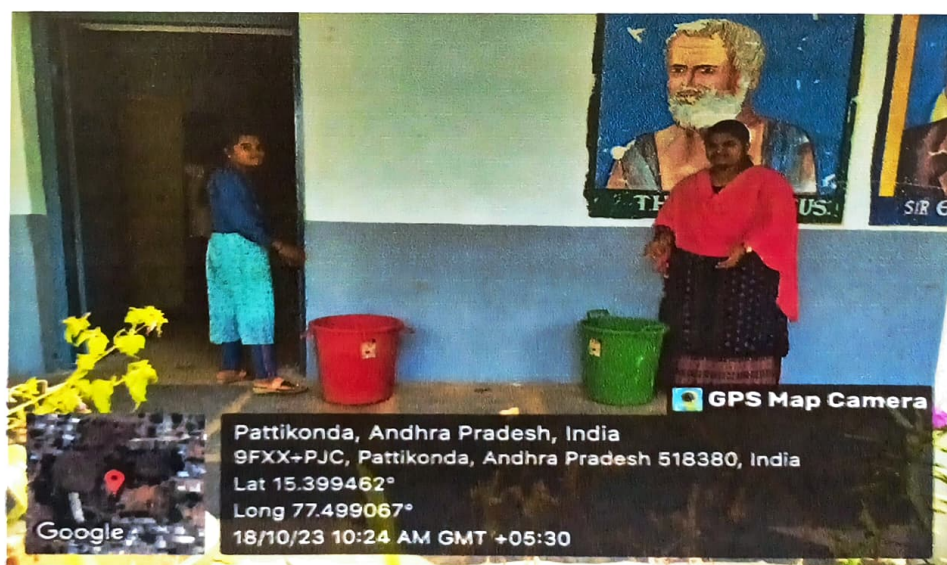
  
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## Degradable and Non-Degradable Waste

All the degradable and non-Degradable waste collected in the college campus and is placed at one particular point. Daily wages workers of our college come to the college campus collects the entire waste dumped specific pit in the college. These wastes include degradable and non-Degradable which are dumped separately in green and red baskets. Green basket is filled with degradable waste and red basket is filled with non-Degradable waste.



  
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