7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures: (Other relevant information)

7.1.2.1 Solar Energy Plant

Vivekananda Institute of Technology has installed solar energy power plant at Mechanical Engineering Department with a capacity of 520V (260 V SOLAR PLATES - Two numbers), as a "Non- conventional energy adaptation". The plant has produced 2912.6 KWh units till 6th Dec 2023. For the production of 1 KWh of electricity through thermal power, DG set emits 207.707 grams of Carbon dioxide into the atmosphere, resulting in reduction of 602.988 kg of carbon dioxide emission in to the atmosphere.

Solar Panels at Mechanical Department

Battery Storage of Power Generated from Solar Panel

Solar Water Heaters at VKIT Girls Hostel

Solar Water Heaters at VKIT Boys Hostel

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7.1.2.1 Use of LED Bulbs

Vivekananda Institute of Technology has adopted a policy of using LED energy efficient bulbs in the campus. Accordingly, all CFL/Halogen bulbs are replaced with LED bulbs after burn out. Currently our institute has been using 350 LED bulbs and LED street lights in the campus. In the coming years, all bulbs will be replaced with LED.

Use of LED Bulbs in Campus

7.1.2.2 Describe the facilities in the Institution for the management of the following types of Degradable and Non-degradable waste (within 500 words)

Vivekananda Institute of Technology has adopted a number of programs to keep the campus environmental friendly. The campus is well-maintained with lots of green space. A committed team of gardeners and housekeeping employees looks after the campus gardens, lawns and plantations. The institution carries out efficient waste management by separating and vermicomposting the garbage. The institution ought to clear off plastic products as much as possible. The faculty and students participated actively and shared their opinions about the trash management strategies used in

1. **Solid Waste Management:** The Institution implements solid waste management by enforcing the waste segregation rules. Dust bins are placed in every classroom, laboratory, rest room, mess and at different locations in the campus. Sweepers are allotted to each floor who manages all the waste generated in the campus. All waste/garbage from college and hostel is segregated at source and disposed off in a proper manner. The wet waste from the hostels/ canteen is given away to Municipality/Swineherd person. Wastes like newspapers and stationaries are sold to proper recycling agencies/vendors and reuse one side printed paper for internal communication. Through recycling the transport of large quantities of garbage to far-off dumps has been reduced. The Institution has organized Swachh Bharat Mission.

Under this banner, the utility of recycling the solid waste has been elaborated. People from different aspects of life delivered their talks about the proper usage of waste. Moreover, the NSS volunteers have also demonstrated the proper procedure of disposing the waste.

a. Vermicomposting: Vermicomposting is a process in which the earthworms convert the organic waste into manure rich in high nutritional content. In a concrete tank, VKIT has set up vermicomposting by combining cow dung slurry and biomass collected from the campus to create a fine bed. Water is then sprayed over the mixture and then earthworm species were collected from GKVK, Agriculture University of Bangalore and released to vermicomposting pit by following standard methods. Then the pit is covered by dried straw on top of the compost pit. Finally, the compost was used for growing plants and trees in the campus.

Vermicomposting Concrete Tank

b. E-Waste Management: VTU has introduced the concept of e-waste management under the course "Applied Chemistry" for engineering students. The institution has started a number of e-waste management programs with the goal of making the campus environmental friendly. Computers and their accessories are examples of e-waste that is frequently upgraded to continue using and prevent trash. Every five years, all electronic waste is sold to authorized SCRAP merchants.

E- Waste Storage

7.1.2.3 : Water Conservation.

A rainwater harvesting system collects and stores rainwater for use by humans. It is sometimes referred to as a rainwater collection system or rainwater catchment system. Water usage for Raw and gardening purpose are made out of this stored water. The institution has installed a rain water harvesting system to ensure the increase in ground water level.

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Rain water gathering pits were built at four points in Administrative building area. Rainfall water is directed through PVC pipes to collection tank. Pond was constructed for collection of rain water.

Rain Water Storage Tanks

Rain Water Storage Pond

7.1.2.4 : GREEN CAMPUS INITIATIVES INCLUDE

1. Restricted Entry of Automobiles

To help students and staff, the college runs a fleet of nine buses that ply across Bengaluru. In order to increase safety, security, save fuel, and lessen environmental pollution, the institute encourages its personnel and students to opt the college transportation rather than driving their own vehicles. All the students are eligible for free transportation from the nearby metro station to college and back.

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2. Battery Powered Vehicles

The Management has procured one battery operated Auto for the use within the campus to minimize the movement and pollution arising due to fuel driven vehicles with in the campus. Use of Bicycle in campus will be entertained in future, yet majority of the students and staff prefer walking within the campus as the same is quite compact. The noise levels in the campus are kept to the minimum due to noise less battery Operated carts and minimal movement of automobiles within the campus.

Electric Auto for Staff usage inside the Campus

3. Pedestrian Friendly Pathways

Vehicle parking space is provided at the main entrance of the college campus. As the campus is Vehicle free with some exceptions, students and staff experience comfort walking through the pedestrian friendly pathways. The internal roads are lined with trees and solar lights and they are properly maintained by the Estate Office.

Pedestrian Friendly Pathways inside Campus

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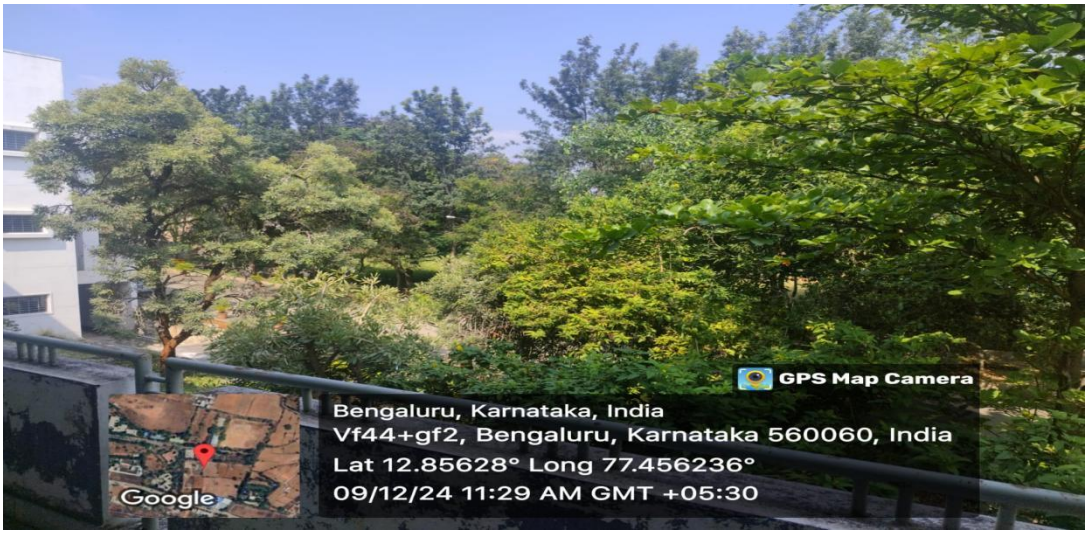
4. Ban on use of Plastic

Plastic bottles, bags, spoons, straws, and cups are among the single-use products that are strictly prohibited. Staff and students are given awareness by orientation and notice boards posted throughout the campus. Steel glasses have been installed in the canteen to replace the plastic tea cups and glasses in an effort to reduce the usage of plastic. It is advised that instead of using plastic water bottles, staff and students should utilize steel or copper bottles.

5. Landscaping with Trees and Plants

Landscaping of the college is worth seeing and reflects aesthetic sense. The institute has a canopy of trees and plants to make the environment pollution free to safeguard the health of all the inmates. The lawns and the trees provide shade and beautiful ambience. Utmost care is taken to develop and maintain green landscaping by trained gardeners and supervisor.

The Estate Office of the college looks after the development and maintenance of the greenery in the campus. The institute authorities are taking initiatives to make the campus paperless. Internal communication in the campus, through e-mail or e-messages is driving towards paperless office.



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Landscaping with Trees and Plants

7. 1.2.5 DISABLED-FRIENDLY, BARRIER FREE ENVIRONMENT

VKIT provides barrier-free environment where people with disabilities can move around safely and use the facilities within the built environment.

- Built environment with ramp/rails for easy access to classrooms
- Signage including tactile path, lights, display boards and signposts

Wheelchair for Disabled Student

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Ramps and Rails for Disabled Student

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