



Sadakathullah Appa College

*An Autonomous Institution, Re-Accredited by NAAC at an 'A' Grade, * ISO 9001: 2015 Certified *

CRITERION VII INSTITUTIONAL VALUES AND BEST PRACTICES

7.1.6

Quality audits on environment and energy are regularly undertaken by the Institution

Green Audit

Submitted to

THE NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)

August 2022



GREEN AUDIT

2019-20 & 2020-21

AUDIT REPORT

Studied for

**Sadakathullah Appa Educational Society's
Sadakathullah Appa College
(Autonomous)**

Rahmath Nagar, Tirunelveli - 627011, Tamil Nadu

Analysed by



26 January 2022

Disclaimer

Green Audit Team has prepared this report for the **Sadakathullah Appa Educational Society's Sadakathullah Appa College (Autonomous)** located at Rahmath Nagar, Tirunelveli - 627011, Tamil Nadu based on input data submitted by the College analysed by the team to the best of their abilities.

The details have been consolidated and thoroughly studied as per the various guidelines for Green Buildings available in National and International Standards; the report has been generated based on comparative analysis of the existing facilities and the prerequisites formulated by various standards. The inputs derived are a result of the inspection and research. These will further enhance and develop a Healthy and Sustainable Institution.

These can be implemented phase wise or as a whole depending on the decision taken by the Hon'ble Management and College. The warranty or undertaking, expressed or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

The audit is a thorough study based on the inspection and on-site investigation of data collected over a period of time and should not be used for any legal action. This is the property of Greenvio Solutions and should not be copied or regenerated in any form.

The Report is prepared by the Team of Greenvio Solutions under their brand and department – Sustainable Academe as Consultancy firm along with Ar. Nahida Shaikh as an Accredited Green Building Professional.

Greenvio Solutions

Developing Healthy and Sustainable Environments

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Sustainable Academe

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1. Introduction

1.1 About the Sadakathullah Appa Educational Society

It was established in the year 1971. The College with a vision by the Society for providing quality higher education to all, especially the Muslim, both men and women, and other deprived, disadvantaged, underprivileged sections of the society, is equally committed to inculcate the students with spiritual and moral values..

It is one of the premier Educational Societies in the country including some of the most distinguished and eminent Institutions and providing quality education with best state of the art facility and Infrastructure to the students. |

1.2 Statements of the College

Vision - Sadakathullah Appa College, founded by the Muslim minority community, is committed to provide quality higher education to all especially the Muslims, both men and women and other deprived, disadvantaged, underprivileged sections of the society. It is equally committed to inculcate the students with spiritual and moral values. The college aims at producing good and useful citizens worthy of the great land.

Mission – The College has the following mission:

- To Offer Undergraduate And Postgraduate Courses In Humanities, Arts And Sciences
- To Undertake, Initiate And Promote Research Both Pure And Applied At M.Phil \ Ph.D Levels.
- To Offer Extension Services.

1.3 About the Institution

Ever since the British period the twin towns of Tirunelveli and Palayamkottai, intersected by the Perennial River Thamirabarani, have been great centres of learning. The Tirunelveli district has a sizeable Muslim population which necessitated the need for an institution of higher education. Due to the dedicated and sincere efforts of the Muslim elite, a College of

Arts and Sciences, named after the renowned Arabic scholar Sadakathullah Appa, was started in 1971. The motto of the College is My Lord, Vouchsafe Me Wisdom.

The College is located on a 40 acre sprawling campus and is run by Sadakathullah Appa Educational Society. It was first affiliated to Madurai Kamaraj University for 20 years. With the birth of the Manonmaniam Sundaranar University in 1990, the College was affiliated to it. It became co-educational in 1997.

The College aims at producing holistic personalities by introducing globally relevant subjects and imbibing in them aptitude for learning, internalizing of best practices, Institutional culture and commitment towards community. The Institution offers the following courses affiliated to Manonmaniam Sundaranar University, a dynamic institution of higher learning, set in a rural milieu of southern Tamil Nadu.

- **Graduation** – It offers the following Undergraduate courses.
 - Bachelor of Arts (B.A.) – Arabic, Tamil, English, History
 - Bachelor of Commerce (B. Com)
 - Bachelor of Science (B. Sc) – Chemistry, Microbiology, Nutrition and Dietetics, Physics, Zoology, Mathematics, Computer Science,
 - Bachelor of Computer Applications (B.C.A.)
 - Bachelor of Science (B. Sc I.T.) Information Technology
 - Bachelor of Library Science (B.L.I.Sc)
- **Post-Graduation** – It offers the following Post Graduation courses.
 - Masters in Arts (English, History)
 - Masters in Commerce
 - Masters in Science (Chemistry Physics, Mathematics, Computer Science, Microbiology, Zoology)
 - Masters in Philosophy (Physics, History, Maths)
- **Study Center** – The Institute has the following Study Centres in the premises.
 - Affiliated to M.S.University Distance Education Courses, Tamil Nadu
 - Affiliated to Indira Gandhi National Open University (I.G.N.O.U.), Delhi

1.4 The surrounding premises around the Institution

The Premises is situated amidst the landscape serene of **Tirunelveli district of Tamil Nadu State** with immense peace and calmness in the surroundings. The college is surrounded by Educational Buildings on the East side, Religious Buildings on the South-West in terms of important micro area divisions and Residential areas on the macro front from all the sides. There is a frontal approach which provides quite a beautiful appreciation space while approaching the premise; this area is surrounded by huge trees which positively complement the background-foreground aspect in terms of Natural space and built-form Architecture. It also provides ample shade which enhance the micro climate of the region. The location of college is feasible to the nearby essential amenities such as Public Health Center, Fire Station, Civic body-Public administrative buildings, Recreational gardens and Police Station.

1.5 Assessment of the College

Affiliations - The College is affiliated to Manonmaniam Sundaranar University, Tamil Nadu.

Certification – The institute has received the ISO, NIRF and AISHE Certifications

Recognitions - University Grant Commission (UGC) by 2(f) 12(b)

Accreditation - The following are details of the reaccreditation of the College.

| Cycle | First | Second | Third |
|--------------|-------|--------|-------|
| CGPA | 75.00 | 3.11 | 3.40 |
| Grade | B+ | A | A |
| Year | 2003 | 2009 | 2015 |

Table 1: NAAC Accreditation details of the College

The college is due to enter its Fourth cycle of NAAC soon.

1.6 Achievements of the College

The college has a tremendous track record of excellence in Built form and educational services provided, below are some of the achievements of the prestigious Institute.

1. The College was declared **an ISO 9001:2000 certified institution in 2009.**
2. The College was declared **an ISO 9001:2008 by the British Standards Institution (BSI) in 2011.**
3. The College was **conferred an Autonomous Status in 2007-2008.**

2. Institution overview

2.1 Populace analysis for Academic year 2019-20

2.1.1 Students data

The student data (shared by the College) shows there were total of **1,587 Girl and 2,069 Boys** students students and **a total of 3,656 students** in the premises.

2.1.2 Staff data

| Type | Male | Female | Total |
|--------------------|------|--------|------------|
| Teaching staff | 76 | 91 | 167 |
| Non-Teaching staff | 49 | 35 | 84 |
| Admin staff | 06 | 02 | 08 |

Table 2: Staff data of the Institution for 2019-20

The staff data shows the premise has a total of **259** staff members.

2.2 Populace analysis for Academic year 2020-21

2.2.1 Students data

The student data (shared by the College) shows there were total of **1,520 Girl and 2,214 Boys** students and **a total of 3,734 students** in the premises.

2.2.2 Staff data

| Type | Male | Female | Total |
|--------------------|------|--------|------------|
| Teaching staff | 79 | 86 | 165 |
| Non-Teaching staff | 53 | 34 | 87 |
| Admin staff | 06 | 02 | 08 |

Table 3: Staff data of the Institution for 2020-21

The staff data shows the premise has a total of **260** staff members.

2.3 Total College Area & College Building Spread Area

The **total site area is 40.52 acres** and the **total Built-up area of College is 1,01,000 sq.ft** for a **total of 3,994 footfalls**.

2.4 College Infrastructure

2.4.1 Establishment

The College is run by **Sadakathullah Appa Educational Society, Tamil Nadu**. The Building is a Reinforced Cement Concrete (RCC) framework building. **Overall the Infrastructure of the Building is excellent in terms of the Architecture Design and Green Building Design. The Premise covers quite a few of the requirements for a Green Habitat.**

2.4.2 Spatial Organisation

The overall ambience of the College is warm and inviting. The classrooms and other spaces have ample natural ventilation in the form of clear glass windows with fresh air ventilation. The architecture of the building is quite well designed. The colour palette not just helps the building to stand out but also provides an Institutional arena. It balances with the local architecture with the natural landscapes of huge trees all around. The design emphasis on providing calmness to the built form and gradually merges with the serene landscape.

The floor to floor height is more than 10 feet. There is no provision for lifts in the premise, whereas there are amenities such as CCTV, Fire extinguishers, Library and first aid box.

2.4.4 Operation and Maintenance of the premises

The interview session with the staff regarding the operation and working hours is summarized in the table. The Institutions are open Monday to Saturday for full day. Sunday is an off for all. Below mentioned in the table are the average working hours. The detail wise timing for each is mentioned below.

| S. No. | Section | Spaces | Time | Hours / day | Days in a year |
|--------|----------------------------|---|------------------------|-------------|----------------|
| 1 | Main Institutional College | Student areas and Teaching faculty | 8:00 a.m. to 6:15 p.m. | 10:15 | 280 |
| 2 | General areas | Admin areas and library, Passage, staircase, toilet | 8:00 a.m. to 6:30 p.m. | 10:30 | 300 |

Table 4: Schedule of the timings of the premises

3. Green Building Study Audit

3.1 About the Green Building Study Audit

It is a systematic study of the aspects which make the Institution a sustainable and healthy premise for its inhabitants.

3.2 Analysis for the Green Building Study Audit

The procedure included detailed verification for the following:

Energy Audit

- Analysis of the Lights, Fans, AC, Equipment
- Renewable energy
- Scope for reducing the current energy bills if any
- Improvement in the thermal comfort of the campus

Green Audit

- Green initiatives
- Hygiene audit
- Water Audit - Analysis of the current water consumption of campus; Scope to include Rain water harvesting and Waste water treatment in campus
- Waste Audit - Current waste produced, its segregation and usage; Strategies to be adopted for waste management and awareness

Environmental Audit

- Analysis of the current landscape + hardscape of campus
- Analysis of the flora and fauna of campus
- Strategies adopted at present to enhance vegetation
- Measures that can be adopted for ecological improvement of campus

3.3 Strategy adopted for Green Building Study Audit

The strategies included data collection from admin department, actual inventory, investigation to check the operation and maintenance, analysis of the data collected and preparation of the Report.

3.4 Timeline of the activities for Green Building Study Audit

- 09 August 2021 – Allotment and Initiation by the College
- 03 October 2021 – Survey of the Student and staff submitted
- 22 November 2021 – Data submitted by College
- 26 January 2022 – Submission of the Report

Green practices

Background reference image Free photos on pixabay

4. Green Practices Audit

The increasing global warming and climate change have made us realise that apart from the enormous strategies the individual small efforts need to be taken by individuals and Educational Institutes as the younger generations are the future of the world and once they are taught about these practices only then can we assume a better future.

4.1 Green practices

We observed the following points during the Site investigation and data verification of the premises; these are common for all the Buildings in the premises.

- **Architecturally planned and designed landscaped garden spaces; Waste management; Wide walkways; Sports facilities & inclusion of Green Zone**
- There is **availability of open space in the premise in addition to the provision of the multiple varieties of flora.**
- **Car-pooling, cycling to college practice are observed by the staff and students.**
- There is **Organic composting, Bio-composting and vermicomposting process carried out for decomposition of organic matter of plants and it is used as an organic fertilizer and increase ecology.**
- The NSS Team, College authorities **jointly conduct initiatives for upgrading of the premises from environmental view.**
- Fresh environment is maintained and upgraded by the presence plants. **The vegetation benefits the users by providing shade.**
- **Lectures/workshops conducted on green practices and green infrastructure.**
- **Signages on the plants mentioning scientific names** - The practice of having the names of each plant and tree provides awareness among the staff and students.
- **Waste water treatment and reuse through septic tank facility.**

4.2 Community Development

The various community development programs conducted include Tree Plantation, Life Learning, Employability Skill program introduced for the youth, Blood Donation Camp, Food Kit Distribution Program to the neighbourhood community, Relief fund programs.

A lot of efforts are involved right from planning to execution. The main motive behind these is social welfare. This kind of a tough process is highly admirable. We respect and congratulate the Institute for the same.

4.3 Eco-friendly initiatives undertaken

The Institution has undertaken the following initiatives through **excellent efforts** towards save environment measures before pandemic. The NSS Department conducts various activities like tree plantation, nature cleanliness, visits to nearby flora and fauna, rural development initiatives.

4.3.1 Environment initiatives undertaken by the college

| Name of the activity | Organizing unit | Name of the scheme | Teacher nos. | Student nos. |
|--------------------------------------|---|--|--------------|--------------|
| Study period 2019-20 (Year 1) | | | | |
| National Seminar | Department of Botany & Zoology /UGC | Environmental protection and Sustainability | 9 | 180 |
| Guest lecture | Department of Zoology & Govn. Museum/Agastyamalai Conservation Centre | Featherd Friends of Tamiraparani | 9 | 120 |
| Webinar | Department of Zoology & Govn. Museum | Novel insights on rapid diagnostic methods and drug discovery for covid-19 | 9 | 148 |
| Study period 2020-21 (Year 2) | | | | |
| Webinar | PG& Research Department Of Micro Biology | Energy Recovery fro Anerobic digestion | 6 | 140 |
| Guest Lecture | PG& Research Department Of Micro Biology | Solid Waste Management | 6 | 140 |

| | | | | |
|---------------------------|---|--|----|-----|
| Webinar | College NSS Units and Manonmaniam Sundaranar University | Climatic Change | 10 | 150 |
| Afforestation | College NSS Units | tree plantation | 8 | 30 |
| Guest lecture | Department of Zoology/Government Museum, Tirunelveli | Forest Festival | 9 | 130 |
| Guest lecture | Department of Zoology/Government Museum, Tirunelveli | Elephant An Umbrella Species | 9 | 130 |
| Virtual conference | Department of Zoology & Consumer awareness club | Hypertension and cardiovascular health | 9 | 130 |

Table 5: Details of the environment related activities

Due to lockdown, more social events could not take place physically after these.

4.3.2 General activities Conducted by NSS and NCC unit

There are six National Service Scheme units in the College. The N.S.S Programme Officers of the College have been working as a team with dedication. The College N.C.C. Unit has a Government sanctioned strength of 104 cadets with 33% reservation for girls.

- Cleaning campaign in the society
- Afforestation through tree plantation
- Creating awareness of such issues as social problems, education and cleanliness
- Awareness Rallies about environment, cleanliness
- Organization of health camps, Street plays

4.4 Survey Results

An online survey was conducted to analyse the student and staff views about the Energy management practices adopted in College, following is the result received.

4.4.1 Participation

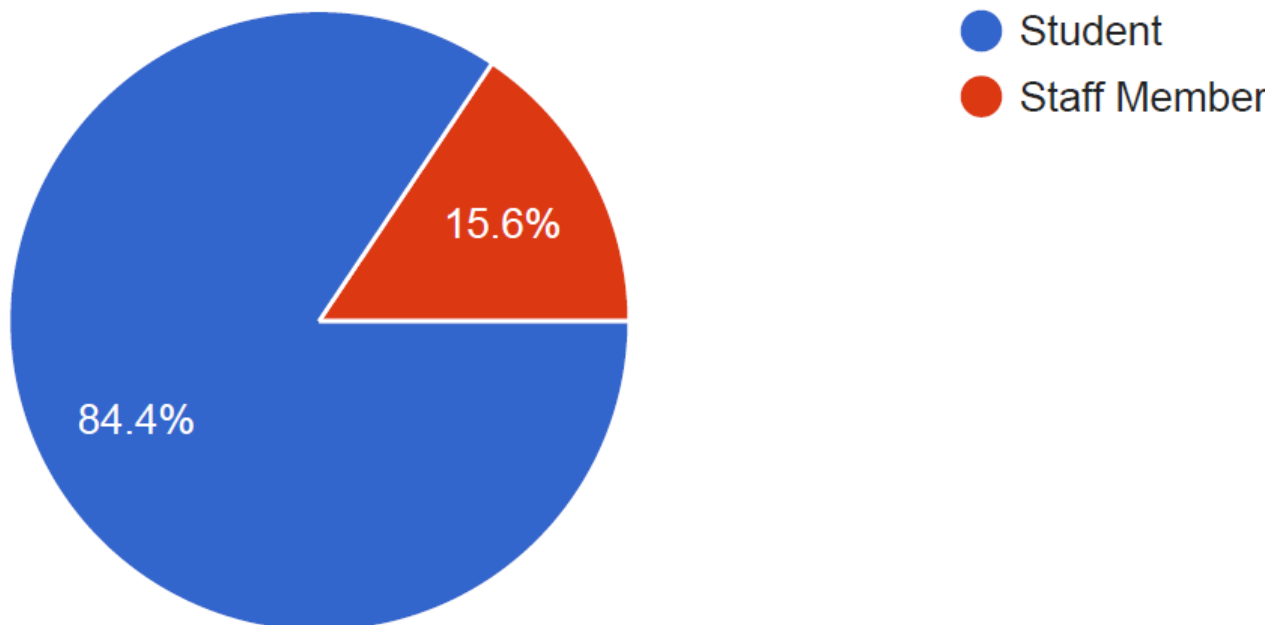


Figure 1: Participation analysis in the survey

A total of **475 responses** were received out of which 84% were students.

Note about the review-rating survey

The Participants were asked to review (Though an online mode) the practice on a scale of 1-5 with scale components as follows:

- Scale 1 – Poor
- Scale 2 – Satisfactory
- Scale 3 – Good
- Scale 4 – Very good
- Scale 5 – Excellent

The figures in each of the columns of graph depict the Number of participants responses in numerical (Percentage of the participant response) – For example 101 responses (44.5%)

4.4.2 Rate the Green awareness practices in College

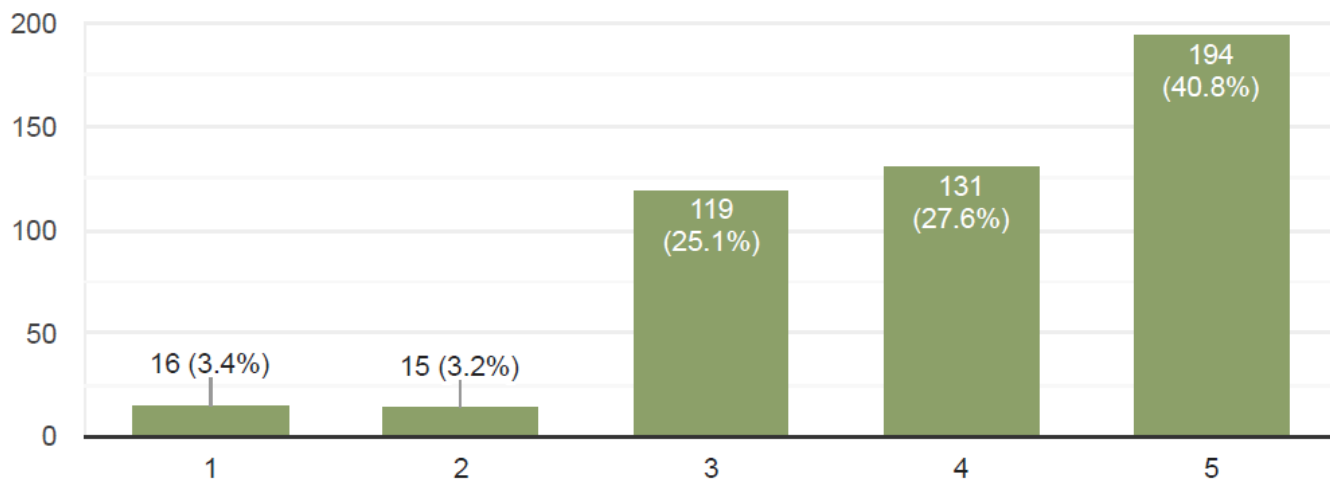


Figure 2: Green awareness practices in College

There were mixed responses received the highest was for **rating 5 (Excellent) at 42%** followed by **28% for rating 4 (Very Good)**.

4.4.3 Does your College conduct environment awareness programs/ webinars/ plantations/ cleanliness or similar programs?

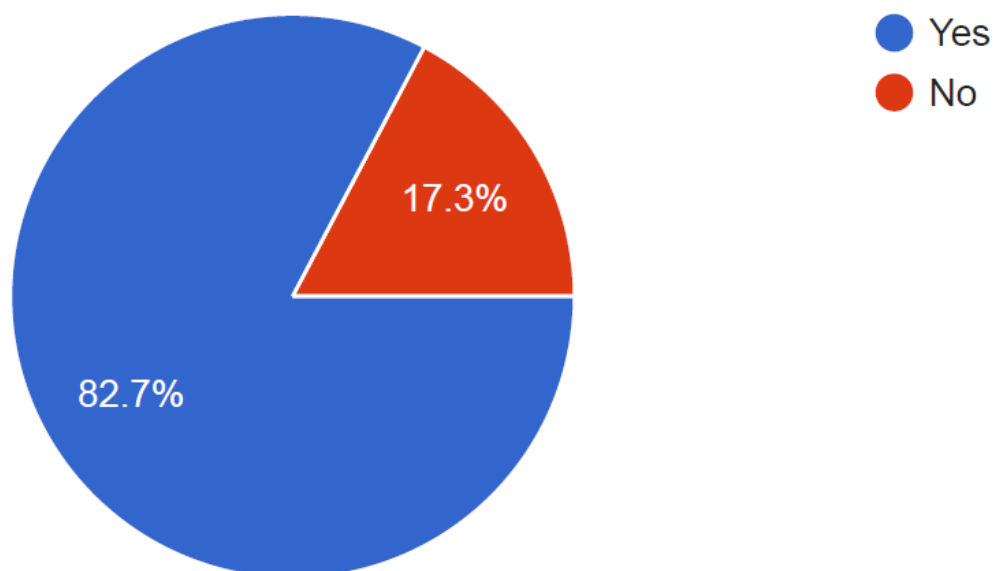


Figure 3: Confirmation of the environment awareness programs/ webinars/ plantations/ cleanliness or similar programs conducted by the College

The students, staff **83%** of responses confirmed activities are conducted which is very excellent.

4.4.4 Do you participate in such events?

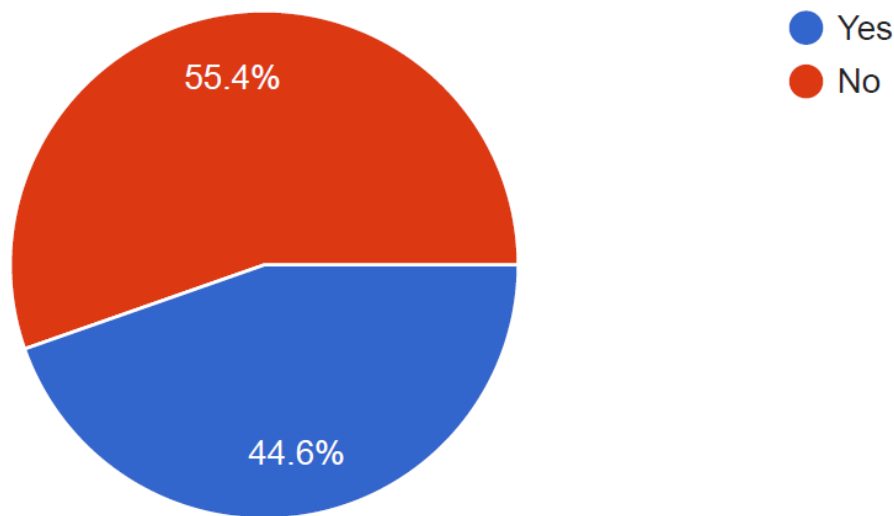


Figure 4: Participation in the environment awareness programs/ webinars/ plantations/ cleanliness or similar programs conducted by the College

The students, staff **almost 45%** of the responses confirmed their participation, **this should be improved in future, the College should ensure maximum participation.**

4.4.5 If yes, what has been your experience about the program?

We have listed some of the key responses below.

- **Excellent.**
- Highly commendable
- Very useful
- **It motivated to do lot of things.**
- There is a good experience in acquiring knowledge.
- As being NCC cadet I have gone through lots of programs.
- **I have got to know the importance of trees in our lives, and how much effort it takes to plant a tree.**
- I got awareness about things of which I was careless before.
- It's very informative
- **It was a nice experience**

4.5 Positive points practiced by the College

a) No vehicle day

Once in a while a No vehicle day is adopted by students and staff to promote the use of eco-friendly vehicles in the premise.

b) Signages on the plants mentioning scientific names

The practice of having the names of each plant and tree increases awareness among the staff and students.

c) Government initiatives

The college has taken up initiatives such as Swachh Bharat Abhiyan, cleanliness drives in college and surrounding villages also activities such as capacity building of locals in surrounding villages has been undertaken by the College students.

4.6 Recommendations for a Sustainable Habitat by Greenvio Solutions

We have found that the current practices are very excellent and thus there are minimal recommendations suggested with respect to this section.

a) Plant as a gift

As a kind gesture the guests visiting the premise can be asked to plant a small plant in the premise itself and they can be even given plants/ bouquet from the flowers of the plants in the premise as a gift.

b) Tree adoption scheme

The college can adopt One Faculty – One tree adoption scheme which is one of its kind practice, this can be very beneficial especially during the summer season.