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COMPLIANCE VERIFICATION

This is to certify that



RAYAT SHIKSHAN SANSTHA'S R. B. NARAYANRAO BORAWAKE COLLEGE, SHRIRAMPUR

Dist. Ahmednagar, Maharashtra - 413719 India

Has been assessed and found to be in accordance with the requirements of detailed below

Green Audit

Reference A064latest revision

Certificate Number: GH00JF/00HE:0318

Originally Registered: 27 Mar.2018 Latest Issue: 27 Mar.2018 Originally Expiry Date: 26 Mar.2021

Validity of this certificate is subject to annual surveillance audit to be done successfully on or before of 16 Mar.2019 & 16 Mar.2020 respectively. In case if surveillance audit is not allowed to be conducted; this certificate shall be suspended/withdrawn.







Juginder Charles
For AQMCS PVT LTD

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Rayat Shikshan Sanstha's

R.B. Narayanrao Borawake College, Shrirampur

Affiliated to Savitribai Phule Pune University, Pune

NAAC Reaccredited "A' Grade (CGPA 3.22), DST-FIST Recognized College,
ISO: 9001-2015



GREEN AUDIT REPORT 2017-18



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1. INTRODUCTION:-

Rayat Shikshan Sanstha, Satara is a premier educational institution acknowledged globally for its variety of impetus. It has invited attention of international educational fraternity towards its recognition as the biggest educational institution in Asia both in quality and quantity parameters. The institution itself is regarded as a noble mission, a noble cause, so earnestly and so endearingly pursued by its founder- father Late Padmabhushan Dr. Karmaveer Bhaurao Patil, the educator of the educators and his legendary wife Sou. Laxmibai Patil with her exemplary sacrifices made to turn the mission into a reality. Dr. Karmaveer Bhaurao Patil had an incisive understanding of the social ills that beset his times and fully realized the dire need of the spread of education. He believed that education alone could correct the social ills such as caste-hierarchy, money-lending, illiteracy, untouchability, superstitions and social and economic inequality. It is the firm belief which eventually actualized the establishment of the Rayat Shikshan Sanstha by opening a Boarding House at Kale, Tal-Karad, Dist-Satara in 1919. The value of its contribution to education in general is enormously great as it has, from the very beginning, tried all its best to lay emphasis on the education of the down-trodden, the poor and the ignorant who really form the major bulk of the society.

Today, the Sanstha runs 42 Senior Colleges, a newly added 1 research institute, 438 secondary schools, 8 training colleges, 42 primary schools (English medium- 20), 31 pre-primary schools (English medium- 18), 80 cosmopolitan hostels (29 for Girls), 7 administrative offices, 8 Ashramshalas, and 57 ancillary Branches. It is spread in 15 districts of Maharashtra and 1 district of Karnataka with 14627 (female 3717) employees belonging to different 170 castes and communities and 4 lakh 54 thousand 165 students. The statistics

speak of the phenomenal progress and achievement of the Rayat Shikshan Sanstha as dreamt by the Karmaveer.

R. B. Narayanrao Borawake College, Shrirampur is the one of the leading educational institute, so it was established on 15th June 1960 as a branch of Rayat Shikshan Sanstha Satara. It is a rural college, situated in Shrirampur Taluka of Ahmednagar district in Maharashtra State. The college has attractive campus spread over area of 42.37 acres of land, in the vicinity of Shrirampur town. It provides quality higher education in Arts and Science streams at graduate, post graduate and research level. College runs 15 UG, 15 PG and 04 research programs and also 22 different short term courses, 03 UGC career oriented courses and 04 skill based courses.

The college is permanently affiliated to Savitribai Phule Pune University, Pune (Formerly known as University of Pune, Pune) and is approved under section 2(f) and 12(b) of the University Grants Commission (UGC) act. The college was awarded the Best College Award by S.P. Pune University, Pune for the year 2008, Rayat Mauli Award of Rayat Shikshan Sanstha in 2007-08, Karmaveer Award of Rayat Shikshan Sanstha, in 2012-13, Best Principal Award of SP Pune University in the 2008, DST-FIST Sponsored College, ISO-9001-2015 Certified College. College reaccredited 'A' grade by NAAC with CGPA 3.22 in 2012.

2. ENVIRONMENTAL POLICY OF THE COLLEGE:-

R. B. Narayanrao Borawake College, Shrirampur is a quality conscious college. It protects its own environment with its green campus initiative and keeps pollution free campus. Environment development is its basic work with the educational policies implemented on the campus.

Environmental conscious administration, the management and the students of the college look after the environment carefully. Every year, during rainy season, we do tree plantation and carefully look after it. It's our own responsibility to preserve the work done on the campus related to the environment.

Our environmental policy:

- i. To create awareness regarding environmental policy amongst the students and the management.
- ii. To maintain pollution free campus by avoiding tobacco, pan-masala, chewing on the campus. As per the govt. rules and regulations regarding the instructions of tobacco free campus signboards are displayed at various places on the campus.
- iii. To Use Solar Energy on College Campus by installing Solar Lamps and Solar water Heaters in Girls and Boys hostels.
- iv. To sensitize the students and staff regarding the use of drinking water properly for which, we have provided purified (RO aqua-guard) drinking water facilities on the campus.
- v. To bring in use the 'Rain Water Harvesting' on the campus. We have collected the rain water from the college roof and it is percolated in the land.

- vi. To observe 'No Vehicle Day' and keep the campus vehicle free. It helps to save the fuel, avoids the environmental pollution.
- vii. To maximize the use of ICT and minimize the use of paper. It will help to go towards 'Paperless Office'.
- viii. To use the solid waste through vermin-compost on the campus and use it as a fertilizer.
 - ix. To reduce the 'sound pollution in the campus, we have built the seating arrangements in the shade of trees in our campus.
 - x. To use 'Use me' Dry and Wet dust bins in the college campus so as to keep college campus clean
 - xi. To protect and nurture the Flora and Fauna on the campus
- xii. To maintain green campus, 'Green Audit' is done regularly.

3. CONSTITUTION FOR GREEN AUDIT:-

The Green Audit Committee will act as per the environmental policy and shoulder the responsibility of maintaining and protecting environment surrounding the college. The aim of the committee is to provide advice for the development of environmental policy and practice in the areas of.

- **❖** Waste Management
 - i. Solid waste management
 - ii. Sewage water management
 - iii. Effluent water treatment
 - iv. E-waste management
- **❖** Soil Management
- ❖ Water conservation and management
- Tree plantations
- ❖ Bio-diversity and threatened/ endangered species preservations
- Energy use and conservations
- ❖ Eco-friendly techniques
- Eco-friendly campus
- **❖** Noise Pollution
- **❖** Air Pollution
- Paper less operating procedure
- Green environment and clean campus

4. COMMITTEE FOR GREEN AUDIT:-

Sr. No	Name of Member	Designation	Title in Committee
1.	Dr. K. H. Shinde	Principal	Chairman
2.	Dr. A. K. Mohite	HoD, Botany	Chief - coordinator
3.	Dr. K.W. Pawar	Asst. Prof. Botany	Coordinator
4.	Dr. S. P. Cholke	HoD Geography	Member
5.	Dr. P.V. Badadhe	Asso. Prof. Chemistry	Member
6.	Dr. C. B. Chaudhari	Asso. Prof. Geography	Member
7.	Dr. S.P Khilari	Asso. Prof. History	Member
8.	Dr. S.K. Khilare	Asst. Prof. Stat.	Member
9.	Prof. V.S. Pawar	Asst. Prof. Physical Edn.	Member

5. AIR POLLUTION MANAGEMENT

A. Periodic Awareness Programme for Staff, Students and Society:-

Our college has been continuously conducting awareness programmes for staff, students and society for protecting and maintaining environment. The awareness is also done by arranging programmes, rallies on various issues related to environment and health. The college students and faculty

Members are involved in the activities through NSS/NCC











B. Plantation programme throughout the year:-

We regularly undertake plantation programme through NSS and NCC units every year as per following schedule.

- 1. In Vanmahotsav we have planted more than 50 trees in last two years.
- 2. Independence Day 15th august.
- 3. Karmveer Jayanti 22nd September and Birthday celebration of Hon. Sau. Meenatai Jagdhane, member, managing council, Rayat Shikshan Sanstha's, Satara.
- 4. In the last three years we have planted 75, 76, 77 trees as the Birth Anniversary celebration of Hon. Dr. Sharachandraji Pawar, President of Rayat Shikshan Sanstha's Satara.

In the above programmes, we have planted number of coconuts, *Alstonia, Ficus, Tecoma*, some Palms and medicinally important plants.NSS unit of our college has adopted a village Nipani Wadgaon where more than 100 trees have been planted over the last three.

Sr. No	Year	No. of Plants	Total no. of plants
1.	2015-2016	75	
2.	2016-2017	126	328
3.	2017-2018	127	













C. Establishment of oxygen park, plantation of oxygen rich plants

Our college has a beautiful green campus. We have skillfully planted the plants like Pimpal, Neem Trees and Tulsi so as to make the campus full of oxygen. The greenery has remained useful in developing Oxygen Park in our college.

D. 'No Smoking, No Tobacco' in campus area:-

Tobacco and tobacco products are strictly prohibited in the college premises and consuming Tobacco and tobacco products is a punishable offence. The instructions regarding this have already been given to the students and the staff members. The boards are displayed at various places in the college.









E. 'No Vehicle Day':-

To avoid the air pollution the vehicles are not allowed in the campus but they are parked in the parking area, reasonably away from college. Our college has a separate parking area to avoid pollution. The <u>Second Thursday</u> of every month *is* declared as no vehicle/ bicycle day in our college. No staff member or students is allowed with vehicle on these two days and the staff and student strictly follow these guidelines.





F. Compulsory pollution check-up of 2W/4W:-

To have a PUC certificate is a mandatory document by RTO authorities; we are creating awareness and instructing students through periodic notices to go for PUC certification of their vehicles.

G. Display boards on college campus:-

Various boards for the awareness on the environment control, noise control, and tobacco free campus, conservation of energy, recycling of resources, tree plantation and environmental policy of college have been displayed for all the stakeholders.









H. Periodic rallies and road shows for awareness:-

Our college is has NSS and NCC units, which regularly takes part in organizing the street shows, rallies and wall papers exhibition every year.

The students also took part in AIDS awareness rally, prevention of self-medication and Dengue awareness rallies. National and social outlook is inculcated in the students through programmes such as Constitution day, Swachh Bharat Abhiyan, blood donation camp, polio eradication, communal harmony, fund raising and natural calamities and other such activities through the NSS unit. The college arranges blood donation camp every year.













I. Eco-ventilators/Exhaust fans in the laboratories and the library:-

All the laboratories and library have proper ventilation and exhaust fans to maintain the freshness.

J. Maintain data for flora of college campus:-

The campus of R. B. Narayanrao Borawake College is green campus, which comprises of following floras:

ON THE BASIS OF LOCATION

❖ PRINCIPAL OFFICE – LEFTSIDE

Sr No	Botanical Name	Habit	No. of Plants	Common Name
1	Vinca rosea	Herb	01	Sadaphuli
2	Annona sqaumosa	Shrub	01	Sitaphal
3	Tecoma stans	Shrub	02	Trumpetbush

4	Thuja orientalis	Shrub	12	Thuja
5	Ixora coccinia	Shrub	02	Ixora
6	Hyophorbe lagenicaulis	Tree	13	Bottle palm
7	Cocus nucifera	Tree	01	Coconut
		Total	32	

❖ PRINCIPAL CABIN- SURROUNDING

1	Ornamental species	Herb	05	
2	Tecoma stans	Shrub	02	Trumpetbush
3	Spathodea campanulata	Tree	01	Ragtura
4	Combretum indicum	Tree	02	Allamanda
5	Cycas roxburghii	Tree	02	Cycas
		Total	12	

❖ IN FRONT OF CHEMISTRY LABORATORY

1)	Catharanthus roseus	Herb	10	Sadaphuli
2)	Calotropis procera	Shrub	02	Rui
3)	Hibiscus rosa -sinensis	shrub	02	Jaswand
4)	Lantana camara	Shrub	25	Ghaneri
,				

5)	Annona squamosa	Shrub	01	Sitaphal
6)	Hyophorbe lagenicaulis	Tree	41	Bottle palm
7)	Delonix regia	Tree	05	Gulmohor
8)	Terminalia cattapa	Tree	01	Badam
9)	Alstonia	Tree	09	Saptaparni
	•	Total	96	

<u>LIBRARY – FRONT SIDE</u>

MCVC AREA:-

1	Thuja orientalis	Shrub	13	Thuja
2	Hyophorbe lagenicaulis	Tree	01	Bottle palm
		Total	14	

CYCLE STAND AREA:-

1	Tribulus terrestris	Herb	50	Chubuk kata
2	Kalanchoe tomentosa	Herb	50	Panad
3	Lantana camara	Shrub	25	Subabhul
4	Sesamum indicum	Tree	07	Vilayti chinch
5	Ficus racemosa	Tree	03	Sesam

6	Azadirachta indica	Tree	14	Umbar
7	Vachellia nilotica	Tree	01	Kadunimb
8	Cassia siamia	Tree	04	Vedibabhul
9	Luecaena leucocephala	Tree	17	Kasud
10	Eucalyptus globulus	Tree	45	Nilgiri
11	Cesalpinia bonducella	Tree	02	Ghaneri
12	Pithecellobium dulce	Tree	05	Sagargota
		Total	223	

LEFT SIDE GIRLS PARKING:-

1	Bougainvillea glabra	Shrub	04	Boganvel
2	Spathodia campanulata	Tree	11	Spathodia
3	Syzygium cumini	Tree	01	Jambul
4	Pongamia pinnata	Tree	04	Karanj
5	Delonix regia	Tree	08	Gulmohor
6	Michelia champaca	Tree	02	Sonchapha
		Total	30	

*** FRONT SIDE OF THE PARKING FOR STAFF:-**

1	Parthenium	Herb	50	Herb
	hysterophorus			

2	Thuja orientalis	Shrub	10	Thuja
3	Cycas roxburghii	Small Tree	01	Cycas
4	Pongamia pinnata	Tree	07	Karanj
5	Azadirachta indica	Tree	08	Neem
6	Santalum album	Tree	10	Chandan
7	Hyophorbe lagenicaulis	Tree	07	Cycas
8	Delonix regia	Tree	01	Bottle palm
9	Syzygium cumini	Tree	12	Jambul
10	Tamarindus indica	Tree	03	Chinch
11	Spathodea campanulata	Tree	12	Pichkari
12	Polyathia longifolia	Tree	07	Ashok
13	Ficus religiosa	Tree	05	Pimpal
		Total	133	

***** INSIDE THE 'A' BLOCK :-

1	Nephrolepis exaltata	Herb	03	Fern
2	Cycas roxburghii	Tree	02	Cycas
3	Ficus religiosa	Tree	02	Pimpal

4	Thuja orientalis	Shrub	02	Thuja
5	Rosa indica	Herb	69	Rose
6	Ficus racemosa	Tree	01	Umbar
7	Gerbera jamesonii	Herb	18	Gerbera
8	Solanum melongena	Herb	50	Brinjal
9	Capsicum annuum	Herb	50	Chilli
10	Mimosa pudica	Herb	15	Lajalu
11	Arachis hypogaea	Herb	10	Groundnut
12	Acalypha spp.	Shrub	25	
		Total	247	

FRONT SIDE OF THE OFFICE:-

1	Abelmoschus sculantum	Herb	02	Bhendi
2	Spathodea campanulata	Herb	03	Pichkari
3	Euphorbia hirta	Herb	Undefined	Asthma-plant
4	Euphorbia geniculata	Herb	Undefined	Dudhani
5	Polyanthia longifolia	Tree	01	Ashoka
6	Peltophorum pterocarpum	Tree	04	Jambha
7	Erythrina variegata	Tree	05	Pangara

Total	15	

❖ INSIDE MAIN GATE –LEFT SIDE :-

1	Hibiscus rosa sinensis	Herb	02	China rose
2	Parthenium hysterophorus	Herb	50	Congress
3	Thuja orientalis	Shrub	02	Thuja
4	Nerium indicum	Shrub	05	Kanher
5	Ixora coccinia	Shrub	05	Ixora
6	Santalum album	Tree	01	Chandan
7	Hyophorbe lagenicaulis	Tree	01	Bottle palm
8	Combretum indicum	Tree	02	Allamanda
9	Plumeria pudica	Tree	03	Putica chafa
10	Coccus nucifera	Tree	05	Naral
11	Ravenala madagascariensis	Tree	02	Travel palm
		Total	78	

***** BOTANICAL GARDEN –FRONT SIDE :-

1	Malingtonia hortensis	Tree	01	Buch
2	Azadirachta indica	Tree	05	Neem
3	Hyophorbe lagenicaulis	Tree	02	Bottle palm

Total	08	

❖ BEHIND THE POLE OF THE FLAG –"A" BLOCK ENTRY GATE –RIGHT SIDE

1	Catharanthus roseus	Herb	08	Kanher
2	Hibiscus rosa-sinensis	Shrub	12	China rose
3	Nerium indicum	Shrub	02	Sadaphuli
4	Ravenala madagascariensis	Tree	04	Travel palm
5	Leucaena leucocephala	Tree	10	Subabul
6	Araucaria columnaris	Tree	01	X-mas tree
7	Hyophorbe lagenicaulis	Tree	04	Bottle palm
8	Thuja orientalis	Tree	05	Thuja
		Total	48	

***** TAMARIND GARDEN:-

1	Cascuta reflexa	Climber	Undefined	Amarvel
2	Clitoria ternatea	Climber	11	Gokarn
3	Murraya koenigii	Shrub	08	Kadipatta
4	Lantana camera	Shrub	02	Ghaneri
5	Morus alba	Shrub	02	Tuti

6	Calotrophis procera	Shrub	02	Rui
7	Duranta repens	Shrub	102	Duranta
8	Annona squamosa	Shrub	01	Sitaphal
9	Ficus religiosa	Tree	02	Pimpal
10	Tamarindus indica	Tree	31	Chinch
11	Acacia nilotica	Tree	23	Babhul
12	Melia azadirachta	Tree	03	Bakannimb
13	Delonix regia	Tree	06	Gulmohor
14	Azadirachta indica	Tree	04	Kadunimb
15	Caryota urens	Tree	01	Fishtail palm
16	Mangifera indica	Tree	11	Mango
17	Aegel marmelos	Tree	01	Bael
18	Cocus nucifera	Tree	14	Coconut
19	Santalum album	Tree	01	Chandan
		Total	225	

IN FRONT OF "I" BUILDING

1	Tridax procumbens	Herb	Undefined	Dagadpala
2	Helianthus anus	Herb	25	Suryaphul
3	Datura innoxia	Shrub	05	Dhotara
4	Thuja orientalis	Shrub	08	Thuja
5	Ixora coccinia	Shrub	02	Ixora

6	Cocus nucifera	Tree	12	Coconut
7	Delonix regia	Tree	07	Gulmohor
8	Tamarindus indica	Tree	04	Chinch
9	Ficus benghalensis	Tree	02	Wad
10	Unknown I		10	
11	Unknown II		01	
12	Unknown III		02	
	•	Total	83	

FROM GIRLS HOSTEL TO GYMKHANA AND TEAK GARDEN

1	Xanthium sp.	Herb	39	Landaga
2	Alternanthera spp.	Herb	02	Chubukkata
3	Casia quriculata	Herb	04	Tarwad
4	Euphorbia hirta	Herb	03	Dudhani
5	Datura sp.	Shrub	34	Dhotara
6	Annona squamosa	Shrub	04	Sitaphal
7	Casia fistula	Shrub	01	Bahawa
8	Tecona grandis	Tree	1250	Sag (Teak)
9	Santalum album	Tree	02	Chandan

10	Azadirachta indica	Tree	08	Kadunimb
11	Butea monosperma	Tree	01	Palas
		Total	1348	

6. NOISE POLLUTION MANAGEMENT

A. Silence zones in the college:-

Various display boards have been placed in the library and other places for awareness to maintain silence in the college.

B. Noise control in the college:-

The college has three gates. Main gate for boys students enter, one gate for girls students and remaining one for staff of the staff quarters and girls students of girls hostel, monitored by the security guard. The security guard and the Physical Director of the college ensure smooth entry and exit of students without any noise and nuisance.







C. Controlling and monitoring of students during entry and exit:-

- 1. Our college has the main entrance and different gates for each building. During the annual social gatherings and other Programs, we use the main Entrance through which the students can enter and exit easily. The emergency gates are used for control the rush of students.
- 2. We have the entry register for the people coming to our college who are not the students of the college.
- 3. The security guard looks after the safety of the college campus.

D. No pressure horns for vehicle:-

Our staff members and students do not use pressure horns and is not permissible for the students studying in the college.



6. HUMAN HEALTH AND SAFETY MANAGAMENT

A. Group insurance for the staff and the students:-

To ensure the safety of the staff members the college has adopted the group insurance. We are also going to have insurance policies of our students in future.

B. Accident policy for Staff:-

The staff has their own Medical and LIC insurance policy in relation to accident.

C. Periodic health check-up:-

The College organizes periodic health check-up every year according to guidelines of S.P. Phule Pune University. Students and the staff members of the college check their health with the help of private medical teams.

D. HB and Blood group check up for Students:-

Our college organizes blood donation camps with the help of government hospital and the private organization. It has helped us in getting the blood group of our students. The HB Check-up has takes place which helped our students in looking after their diet. The department of Zoology has practical exercise for T. Y. B.Sc. Students. Zoology department engages in H.B. checking every year to their students and other students of College.





E. Awareness campaign for human health:-

Various lectures and programmes are organized for creating health awareness and developing good habits among students and staff members. Road shows are organized through NSS / NCC unit for health awareness. Every year NSS unit organizes a camp in nearby villages and plans to clean the village campus and various lectures are organized to create awareness in villagers. Science last three years NSS unit of our college adopted a village 'Nipani Wadgaon' for the sake of environment awareness.











F. Sanitary napkins vending machines in common rooms:-

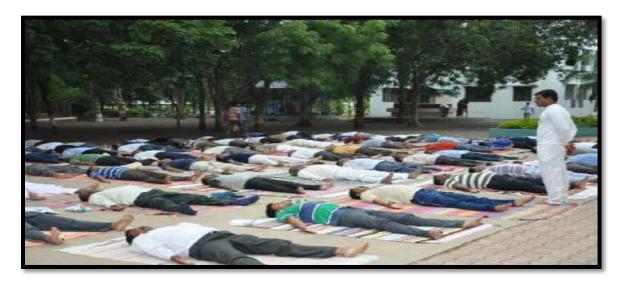
The use of sanitary napkins is very important for a girl student and Ladies staff from their health point of view. So sanitary napkins are available in girls hostel and the girls common room.



G. Yoga / Meditation for staff:-

Health is wealth, is understood by our students and staff. Our college campus provides the facilities of indoor and outdoor stadium for the students, staff and the denizens of town Shrirampur. Our sports faculty provides proper guidance and we are motivated to do the daily exercise of Yoga / Meditation in the college.







Yoga / Meditation in the college



Yoga / Meditation in the college

H. Awareness campaign for Society:-

NSS and NCC units of the college regularly arrange street shows and rallies for creating awareness in society on Dengue and other diseases. Awareness is also done with campaigns for Aids, Cancer, and TB with coordination with Shrirampur Municipal Corporation.



I. Awareness campaign for aids, cancer and TB in coordination with PHC:

Our college NSS activities, NCC activities are visible in doing the awareness regarding Aids, Cancer and TB. Time to time, the other activities of the college also creates awareness by organizing poster competitions, wallpapers etc.

J. Organizing Blood donation camps:-

The NCC and NSS unit of college organizes blood donation camps on various occasions in association with government and private hospitals of Shrirampur.



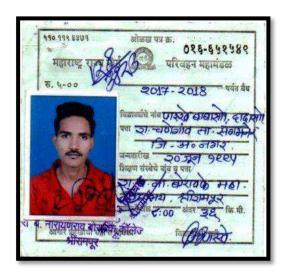


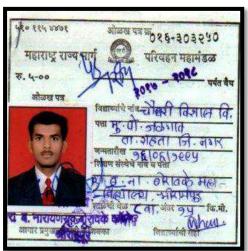




K. Bus passes for students :-

Our college is having the students from the neighbourhood and the rural vicinity. The college helps them in getting the bus passes. We have developed linkage with the office of bus depot. It has helped the college to increase the strength which doesn't use vehicles due to which the reduction of air pollution takes place.





Bus passes for students

L. Fire safety:

R. B. Narayanrao Borawake College, Shrirampur has awareness and safety facility. College has many fire extinguishers, all across College Buildings. Fire extinguishers have been fixed in the main building, library building, Canteen, and all Department of the college for safety purpose. Also College performed the fire audit during the 2017-2018.





Fire safety









Fire safety workshop

M. SOP's on safety in laboratory and first aid box:

All the laboratories are equipped with SOP's, Do's Don't' for the laboratory safety. The students are also trained for first aid and emergency treatment in various situations. First aid boxes are fixed in administrative office and indoor stadium & all laboratories are having first aid box of the college.

N. Emergency phone numbers:

All the emergency phone numbers are displayed at the entrance and the copy is also available in the administrative office.



O. Controlled area for storage of hazardous chemicals:-

- Safety work instruction when using hazardous chemicals:-
 - ➤ While using hazardous chemicals don't eat, drink, beverages & wait until your work is done. Wash your hands clean & neat.
 - ➤ Make sure you know where the nearest firefighting equipment is located.
 - ➤ The Hazardous substances should always be in accordance with the M.S.D.S. specification.
 - ➤ Only use the product for its intended purpose never misuses the product for anything other than its intended purpose.

• Personal chemical safety rules :-

- ➤ Wear gloves while handling chemicals.
- > Follow instructor's directions.
- > Dispose off waste properly.
- Lab coat are mandatory in laboratory.
- > Wear shoes.

Safety goggles must be worn all the time while working in the lab.

8. SOIL POLLUTION MANAGEMENT :-

A. Vermicompost plant in college (use of bio-fertilizers) :-

Our college has vermi compost unit for collection of garbage in it. It is biocompatible and of natural origin. Also College a the Soil and Water testing laboratory through which we test soil samples around the Shrirampur area and many farmers get benefit of this laboratory.









Soil and Water Analysis Laboratory

B. Rain water harvesting:-

The college is having rain water harvesting system to conserve the rain water. The earth water level is increased which helped to have water to our college boar. It increases natural storage of water, and helps the college in getting water for various purposes.

From the college campus, the amount of harvested water collected from rooftop is 5984.97 cu. m. while the surface land area calculated is 10733.66 cu. m. The total college campus harvesting potential is 16718.63 cu. m. or 16718630 liters. This huge water can be used for recharged ground water level of bore wells within campus.

The water can also be stored in a sump of designed dimension to ensure watering for plant and for vehicle washing. It quantified that the rain water harvesting potential is 78.44% of the total ground water demand of campus.





Green Audit Report 2017-2018













C. Plastic free Campus:-

The college is having plastic free campus and also creating awareness amongst the students and staff members regarding the same by display boards and other programmes.









9. OTHER SECTORS FOR ENVIRONMENT MANAGEMENT:-

A. Waste control chemicals and e-waste Management :-

The college has installed Effluent Treatment Plant (ETP) for treating the liquid waste which is generated in the chemistry laboratories. The recycled water is used for various purposes on the campus. In near future, we also use microanalysis methods and Eco-friendly methods for experimentation.





WASTE TREATMENT AND DISPOSAL

Solid waste Management:

Dust beans are kept at different places in campus as well as in every class rooms and laboratories. Solid waste was (Dry and wet) collected regularly at one place and informed to Municipal Corporation for proper disposal. Waste from plants are also regularly collected and used in vermi-composting unit.

Liquid waste Management: Proposed tank for purification waste water from laboratory and hostels.

E-waste management: E- waste from college campus is collected and sold it to proper agency.

B. Use of LED bulbs in college:-

Principal's Office, Office of IQAC, Administrative Office, Library, Guest Rooms, Indoor Stadium, Ladies Common Room, Virtual Classrooms, Language Lab, Computer Labs, Science Lab, Departmental Offices, and all classrooms have LED bulbs to save and conserve energy.

C. Conducting energy audit :-

Energy audit of consumption of electricity in the college is conducted during the academic year 2016-2017 by Aditi Engineering Services, Nashik. The objective of this audit is to identify energy consumption and conservation opportunity.

D. Dustbins on the premises:-

In our college campus all the laboratories, cabin and corridor is having dustbins. Laboratories are having separate dustbins for dry and wet wastage. The use of dustbins maintains garbage free campus.

E. No uses of plastic in canteen: -

Our canteen uses paper plates, newspapers, utensils so as to control the use of plastic on the college campus. It has helped in keeping the campus plastic free.

F. Use of dust proof chalks:-

In our college some classrooms and laboratories are fitted with white and green boards with dust free chalks and marker pens.

G. Minimum use of Photocopy/printing:-

In the college paper data is converted into soft copies and procedures are digitalized which minimizes the use of printing papers. We also put warming stickers on each Photocopy/ Printing machine to use. The maximum working procedures are paperless. We take the already one sided Photocopy papers in use to avoid the maximum use of papers.



Savitribai Phule Pune University

Department of Environmental Sciences

Dr. Nanasaheb Parulekar Paryavaran Bhavan Ganeshkhind Road Savitribai Phule Pune University, Pune – 411 007, India

Praveen G. Saptarshi Professor Emeritus Date: 14th November 2017

Certificate

This is to certify that the Green Audit Report in the year 2015-16 prepared by Bio-Geo Consultancy with due cooperation of the principal and staff of Rayat Shikshan Sanstha's R. B. Narayanrao Borawake College, Shrirampur, Tal.-Shrirampur, District- Ahmednagar - 413719, India, is prepared by following appropriate procedures, methods, knowledge and expertise in the field of Environmental Sciences.

My observations are based on study of the report and frequent visits to the college for validation of data given in the report.

I wish a great future to the college and expect that the students and staff would be enthused to conserve ecology within the campus and outside as well.

Hamplunz

Praveen G. Saptarshi

GREEN AUDIT REPORT 2015-16

RAYAT SHIKSHAN SANSTHA'S

R. B. NARAYANRAO BORAWAKE COLLEGE, SHRIRAMPUR

Affiliated to SavitribaiPhule Pune University, Pune.

[PU/AN/AS/02/(1960)] (Jr./HSC/Id.No.J-12.14001)

Our Vision

- SELF-RELIANT, SELF-SUFFICING AND SELF-RESPECTING EDUCATION FOR SOCIETY FACING REFORMATION.
- EDUCATION FOR THE YOUTH ADVANCING TOWARDS THE WORLD LEADER NATION-INDIA.
- EDUCATION FOR ALL TO ERADICATE ALL SOCIAL ILLS.

Our mission

- TO PROVIDE THE DIGNITY TO LABOUR AND MAKE ARRANGEMENTS OF PROVIDING THE EDUCATION AGAINST THE LABOUR.
- TOA:IM ΑT ALL ROUND PERSONALITY DEVELOPMENT OF THE STUDENTS THROUGH CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES IN ASSOCIATION WITH VARIOUS SOCIAL **CULTURAL** ORGANIZATIONS. TO PROVIDE & PLATFORM TO THE STUDENTS BY GIVING THEM AN OPPORTUNITY TO FACE THE CHALLENGES OF THE COMPETITIVE WORLD, WITH UTMOST UTILIZATION OF THEIR POTENTIAL IN ACADEMIC PROGRAMMES. SPORTS AND OTHER **EVENTS.**
- TO INCULCATE VALUES LIKE SOCIAL EQUALITY,
 JUSTICE FRATERNITY AND SELF-HELP AMONG THE

Principal's Message



I am pleased to offer my message on the occasion of the publication of Report of 'Green Audit'. It is really grateful to work in **R. B. Narayanrao Borawake College** and to be a part of **Rayat Shikshan Sansta**. It is my honor and privilege to be writing to you as your principal. This is the place where an education movement was motivated by **Late Dr. Karmaveer Bhaurao Patil** which sowed the seeds of education in the soil of Shrirampur.

Students, I am aware that only infrastructure and impressive building do not create a desirable education. The powerful manpower with brilliant professional skills and sound knowledge of global world makes collage perfect. Our teachers play an important role in creating ideal and unique students with scientific, democratic, spiritual and universal principles. Elevated moral values and positive sense of globalization should be of prime concern in our college. Our many students and faculty have been presenting papers in nationalized and International conferences, and many have published their effort in research journals of reputation. Our quality in academics and connected area has been acknowledged by NAAC committee.

Most importantly, environmental values inculcated in our students help to create environmental concern in the villages around the college. We also try to train our students to identify environmental opportunities with the activities like organic farming, fish farming, fodder development, optimal use of water for agriculture, etc.

Green Audit is useful for all of us to understand environmental resources in scientific way. The report would be useful for us for future development. Efforts made by our institution for the protection of environment and biodiversity conservation have been well appreciated in the audit. It encourages us for further strengthening environment of our campus in particular and the areas around in general. I express my heartfelt thanks to expert members of team carrying out Green Audit of our campus.

Prin. Dr. K. H. Shinde

Preface

The concept of 'GREEN AUDIT-2016-17 was put forth by Hon'ble Shri Sharadchandraji Pawar, President, Rayat Shikshan Sanstha, Satara. He is involved in tree plantation programmes for the last 50 years. Being visionary and committed to upliftment of weaker section of society he is always proactive for environmental conservation. He has demonstrated how eco-friendly campus can provide healthy and comfortable atmosphere for the school/college going children. It was his idea to carry out green audit for the campus of Shrirampur College. We are happy to shoulder the responsibility.

Green audit of a college campus aims at understanding the present environmental status and to find out ways to internalize environmental issues which are well felt externally. It is also an attempt to develop initiative of all the stakeholders, viz. management, Principal, staff, students and parents to develop campus which ensures clean and green environment for learners. We also hope that such kind of exercise can develop environmental awareness among the families of students and in turn villages. With this vision in mind attempt has been made to document the green status of the campus adopting proper tools and methodology. For this, aspects like landscaping and plantation, solid waste management, recycling of waste water, conservation of energy, water conservation, rainwater harvesting and minimum usage of paper, E-Waste collection, segregation of wet and dry waste, etc. have been considered for our observations.

We are happy to note that the college exhibits almost all the aspects of "Green Campus" with participation of stakeholders in true sense of the term. It is well reflected in the activities like tree plantation with good phyto-diversity, organic farming, vermin culture, rain water harvesting, wastewater management, green building, use of renewable resources etc.

Acknowlegements

We take this opportunity to express our gratitude towards the founder

president of the Institute Hon'ble Shri Sharadchandraji Pawar, and his colleagues in

the management council. We also express sense of gratitude towards Honorable Sau.

Meenatai Jagadhane, Chairman, Rayat Educational campus Shrirampur and Local

Management Committee of the college for their valuable guidance, continuous

encouragement, generous gift of time with constructive criticism and suggestion

during the composition of work of entire 'Green Audit Report-2016-17.

We express our deep sense of gratitude to Principal Dr. K. H. Shindewho inspired

and encouraged us throughout the work. We gratefully acknowledge the help

provided by them on several occasions. The assistance provided by Dr S. P. Cholke,

Dr. P.V. Badadhe, Dr. K.W. Pawar and students proved to be valuable to make the

report in proper shape.

Place: Shrirampur.

Date: 12/04/2016

Dr. Jyotiram C. More

Dr. D. N.Patil

5

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Green Audit Report {2015-16}

Objectives of the study

The main objective of the green audit to promote the environment management and conservation in the college campus. The purpose of the audit is to identify, quantify, describe and priorities frame work of environment sustainability in compliance with the applicable regulations, policies and standards.

The main objectives of carrying out Green audit are.

- ➤ To introduce and aware students regarding importance of our surrounding environment and its protection.
- To secure the environment and minimize the threats posed to human health by analyzing the pattern and extent of resource use on the campus
- ➤ To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requires high cost.
- > To bring out a status report on environment due to the activities of the institution.
- > To find the innovative ideas to minimize the future threats to the environment.

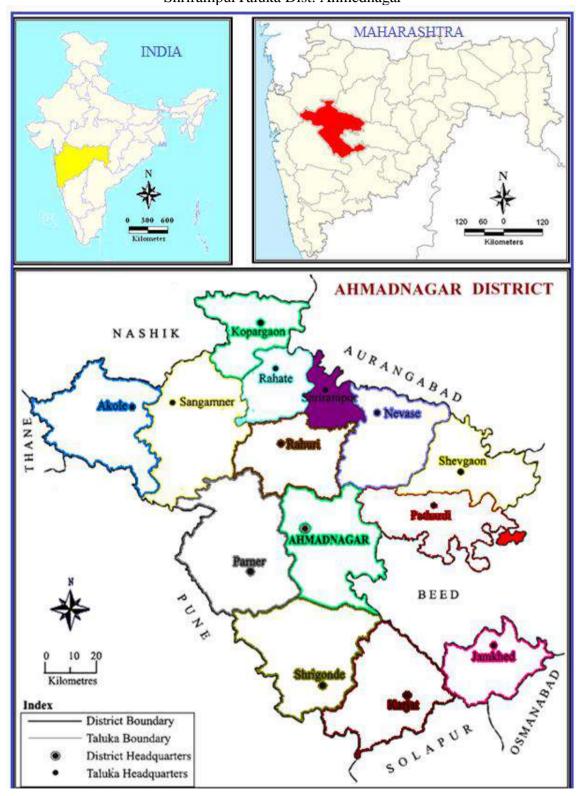
Methodology

In order to perform Green audit, the methodology included different tools such as survey of campus plant, physical inspections of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following areas to summaries the present status of environment management in the campus;

- Water management
- > Energy conservation
- ➤ Waste management
- > E-waste management
- ➤ Green area management

Location:- Map

R. B. NARAYANRAO BORAWAKE COLLEGE, SHRIRAMPUR, is located in ShrirampurTaluka Dist. Ahmednagar



About Shrirampur City:

Shrirampur is a city and a municipal council in Ahmednagar district in the Indian state of Maharashtra situated at 19.62 N, 74.66 E in western Maharashtra.

Shrirampur is quite new as compared to other cities, being only around 75 years old. When Central Railway (India) Daund-Manmad Line was being laid a railway station for the village Belapur (बेलापुर) was made which is nearly 6 km (3.7 mi) from the place where station was going to build. During this period people started living around the railway station. This area was considered as one of the major producers of sugarcane in the sugarcane belt in the state of Maharashtra. Over 10 to 15 sugarcane industries surrounded the town make for a very industrious economy. People from all parts of Maharashtra started to come in Shrirampur and settled down here. It was after partition that this place was made native by many migrants from Pakistan, who opted to settle in India. As a result, non-Maharashtrian communities also made their presence felt in lifting this city into a major business center. The rapid pace shown from 60s up to 80s slowed down and this town, in spite of having tremendous merits, is far from having a much awaited district status which was one time very much in its reach.



Country	India India
State	Maharashtra
District	Ahmadnagar
Government	
Mayor	Anuradha Adik
Area	
Total	10 km² (4 sq mi)
Elevation	541 m (1,775 ft)
Population (2011)	
• Total	89,282
Density	8,900/km ² (23,000/sq mi)
Languages	
Official	Marathi
Time zone	IST (UTC+5:30)
PIN	413709
Telephone code	91 2422
Vehicle registration	MH-17

Climate

Shrirampur has a tropical wet and dry climate with average temperatures ranging between 20 to 42 °C (68 to 108 °F). Shrirampur experiences three distinct seasons: Summer, Monsoon and winter. Typical summer months are from March to May, with maximum temperatures ranging from 30 to 40 °C (86 to 104 °F). The

warmest months in Shrirampur are April and May; the city often receives locally developed heavy thundershowers in the month of May (although humidity remains high). City experiences rise in atmospheric pressure in mid October when temperatures range from 35 to 40 °C (95 to 104 °F).

Demographics

As of 2011 India census, Shrirampur had a population of 89,282. Males constitute 51% of the population and females 49%. Shrirampur has an average literacy rate of 72%, higher than the national average of 59.5%: male literacy is 79%, and female literacy is 66%. In Shrirampur, 13% of the population is under 6 years of age. Shrirampur had Sex Ratio - 939.

INTRODUCTION:-

R. B. NARAYANRAO BORAWAKE COLLEGE, SHRIRAMPUR, established in 1960 leads 42 acres area of campus, where with senior college there is administrative building, hostel, canteen, Secondary and higher secondary school, staff quarters, Ladies hostel. About 7000 population provided with facility of water, canteen, toilet, electricity.

Before establishment of this campus it was bare land, after construction of various building we develop greenery in surrounding area of the building, with keeping view to creates eco-friendly environment in this campus we are aware about sustainable use of this campus, we undertake activities like landscaping and plantation, processing and reuse of solid waste of the plant debris and canteen, recycling of the waste water, rainwater harvesting, energy conservation, e-waste management keep the environment of the campus clean and fresh enhance educational environment.

Green audit is defined as it is ultimately about corporate responsibility. It is the process of assessing the environment impact of an organization, process, project, product etc. An examination of what a company is doing to prevent its business activities from harming the environment (Macmillan).

We are making green audit of campus and facilities to keep environment of college campus eco-friendly, we conduct following activities

LANDSCAPING AND PLANTATION:

Important Aim and objective of plantation are as below

Aim:

- 1)To develop campus eco-friendly
- 2)To creates healthy environment for learning

Objectives:

- 1) Plants provides natural oxygen
- 2) Plants keeps surrounding environment clean and cool
- 3) Plants protect from dust which are collected on foliage
- 4) Trapping of dust on leaves creates dust free environment in building.
- 5) Increase aesthetic view of the campus
- 6) Plants are important it creates natural habitat for birds and animal.

Landscaping: Landscape is an art to develop specific space of land into green with aesthetic view commonly called as 'beautification'.

Earlier our college campus land was a bare land. After establishment of the **R. B. NARAYANRAO BORAWAKE COLLEGE, SHRIRAMPUR,** in year 1942 landscaping is done, 42 acres of land has various buildings such as hostel, canteen, school, senior college, junior college toilet building, staff quarters and ladies hostel surrounding area of the building were bare land of rocks because of water scarcity it was very difficult to made campus green, it was disaster for us because without plants how this campus can breath after 16 years of efforts now our project developed as one of the Eco-friendly campus whole campus is divided for specific type of plantation now in our campus green by planting of 35 speciesof plants. Students of earn & learn, N.S.S., Nature Club, Department of Botany and non-teaching staff take care of the campus and keep the campus green and clean.

Plantation:

Aims and Objectives:

- 1) To create healthy environment
- 2) To develop the natural habitat in the campus

- 3) Increase oxygen level of the campus.
- 4) Keep surrounding environment cool.
- 5) Plants give shade.
- 6) Plant gives natural habitat for birds and animals including micro-organism

Plantation of plant sapling had been implemented as per location, different variety of plans are planted in various places with keeping aesthetic view and type of soil texture.

ON THE BASIS OF LOCATION

PRINCIPAL OFFICE - BACKSIDE

❖ PRINCIPAL OFFICE - LEFTSIDE

1	Vincarosea	Herb	01	Sadaphuli
2	Annonasqaumosa	Shrub	01	Sitaphal
3	Tecomastans	Shrub	02	Trumpetbush
4	Thujaorientalis	Shrub	12	Thuja
5	Ixoracoccinia	Shrub	02	Ixora
6	Hyophorbelagenicaulis	Tree	13	Bottle palm
7	Cocusnucifera	Tree	01	Coconut
Tot	al		32	

❖ PRINCIPAL CABIN- SURROUNDING

1	Ornamental species	Herb	05	
2	Tecomastans	Shrub	02	Trumpetbush
3	Spathodeacampanulata	Tree	01	Ragtura
4	Combretumindicum	Tree	02	Allamanda
5	Cycasroxburghii	Tree	02	Cycas
Tota	al		12	

❖ IN FRONT OF CHEMISTRY LABORATORY

1)	Catharanthusroseus	Herb	10	Sadaphuli
2)	Calotropisprocera	Shrub	02	Rui
3)	Hibiscus rosa-sinensis	shrub	02	Jaswand
4)	Lantana camara	Shrub	25	Ghaneri
5)	Annonasquamosa	Shrub	01	Sitaphal
6)	Hyophorbelagenicaulis	Tree	41	Bottle palm
7)	Delonixregia	Tree	05	Gulmohor
8)	Terminaliacattapa	Tree	01	Badam
9)	Alstonia	Tree	09	Saptaparni
Total			96	

❖ <u>Library – Front Side</u>

❖ MCVC AREA:

1	Thujaorientalis	Shrub	13	Thuja
2	Hyophorbelagenicaulis	Tree	01	Bottle palm
Total			14	

CYCLE STAND AREA:

1	Tribulusterrestris	Herb	50	Chubuk kata
2	Kalanchoetomentosa	Herb	50	Panad
3	Lantana camara	Shrub	25	Subabhul
4	Sesamumindicum	Tree	07	Vilayti chinch
5	Ficusracemosa	Tree	03	Sesam
6	Azadirachtaindica	Tree	14	Umbar
7	Vachellianilotica	Tree	01	Kadunimb
8	Cassia siamia	Tree	04	Vedibabhul
9	Luecaenaleucocephala	Tree	17	Kasud
10	Eucalyptus globulus	Tree	45	Nilgiri
11	Cesalpiniabonducella	Tree	02	Ghaneri
12	Pithecellobiumdulce	Tree	05	Sagargota
Tot	al	<u>-</u>	223	

GIRLS PARKING LEFT SIDE:

1	Bougainvillea glabra	Shrub	04	Boganvel
2	Spathodiacampanulata	Tree	11	Spathodia
3	Syzygiumcumini	Tree	01	Jambul
4	Pongamiapinnata	Tree	04	Karanj
5	Delonixregia	Tree	08	Gulmohor
6	Micheliachampaca	Tree	02	Sonchapha
Tot	al	30		

❖ FRONT SIDE OF THE STAFF STAND :

1	Partheniumhysterophorus	Herb	50	Herb
2	Thujaorientalis	Shrub	10	Thuja
3	Cycasroxburghii	Small Tree	01	Cycas
4	Pongamiapinnata	Tree	07	Karanj
5	Azadirachtaindica	Tree	08	Neem
6	Santalum album	Tree	10	Chandan
7	Hyophorbelagenicaulis	Tree	07	Cycas
8	Delonixregia	Tree	01	Bottle palm
9	Syzygiumcumini	Tree	12	Jambul
10	Tamarindusindica	Tree	03	Chinch
11	Spathodeacampanulata	Tree	12	Pichklari
12	Polyathialongifolia	Tree	07	Ashok
13	Ficusreligiosa	Tree	05	Pimpal
Tota	nl	'	133	

❖ INSIDE A BLOCK :

1	Nephrolepisexaltata	Herb	03	Fern
2	Cycasroxburghii	Tree	02	Cycas
3	Ficusreligiosa	Tree	02	Pimpal
4	Thujaorientalis	Shrub	02	Thuja
5	Rosa indica	Herb	69	Rose
6	Ficusracemosa	Tree	01	Umbar
7	Gerbera jamesonii	Herb	18	Gerbera
8	Solanummelongena	Herb	50	Brinjal
9	Capsicum annuum	Herb	50	Chilli
10	Mimosa pudica	Herb	15	Lajalu
11	Arachishypogaea	Herb	10	Groundnut
12	Acalyphaspp.	Shrub	25	
Tota	al		247	

❖ FRONT SIDE OF THE OFFICE:

1	Abelmoschussculantum	Herb	02	Bhendi
2	Spathodeacampanulata	Herb	03	Pichkari
3	Euphorbia hirta	Herb	Undefined	Dudhani
4	Euphorbiagericulata	Herb	Undefined	
5	Polyanthialongifolia	Tree	01	Ashoka
6	Peltophorumpterocarpum	Tree	04	Jambha
7	Erythrinavariegata	Tree	05	Pangara
Tota	al		15	

❖ INSIDE GATE -LEFT SIDE :

1	Hibiscus rosasinensis	Herb	02	China rose
2	Partheniumhysterophorus	Herb	50	Congress
3	Thujaorientalis	Shrub	02	Thuja
4	Neriumindicum	Shrub	05	Kanher
5	Ixoracoccinia	Shrub	05	Ixora
6	Santalum album	Tree	01	Chandan
7	Hyophorbelagenicaulis	Tree	01	Bottle palm
8	Combretumindicum	Tree	02	Allamanda
9	Plumeriapudica	Tree	03	Puticachafa
10	Coccusnucifera	Tree	05	Naral
11	Ravenalamadagascariensis	Tree	02	Travel palm
Tota	1		78	

❖ <u>Botanical Garden -Front Side:</u>

1	Malingtoniahortensis	Tree	01	Buch
2	Azadirachtaindica	Tree	05	Neem
3	Hyophorbelagenicaulis	Tree	02	Bottle palm
Total			08	

❖ BEHIND THE POLE OF THE FLAG –"A" BUILDING

❖ ENTRY GATE -RIGHT SIDE

1	Catharanthusroseus	Herb	02	Kanher
2	Hibiscus rosa-sinensis	Shrub	02	China rose
3	Neriumindicum	Shrub	02	Sadaphuli
4	Ravenalamadagascariensis	Tree	04	Travel palm
5	Leucaenaleucacephala	Tree	10	-
6	Araucaria columnaris	Tree	01	X-mas tree
7	Hyophorbelagenicaulis	Tree	04	Bottle palm
8	Thujaorientalis	Tree	03	Thuja
Tota	al	28		

❖ TAMARANDUS INDICA GARDEN :

1	Cascutareflexa	Climber	Undefined	Amarvel
2	Clitoriaternatea	Climber	11	Gokarn
3	Murrayakoenigii	Shrub	02	Kadipatta
4	Lantana camera	Shrub	02	Ghaneri
5	Morus alba	Shrub	02	Tuti
6	Calotrophisprocera	Shrub	02	Rui
7	Durantarepens	Shrub	102	Duranta
8	Annonasquamosa	Shrub	01	Sitaphal
9	Ficusreligiosa	Tree	02	Pimpal
10	Tamarindusindica	Tree	31	Chinch
11	Acacianilotica	Tree	23	Babhul
12	Meliaazadirachta	Tree	03	Bakannimb
13	Delonixregia	Tree	02	Gulmohor
14	Azadirachtaindica	Tree	04	Kadunimb
15	Caryotaurens	Tree	01	Fishtail palm
16	Mangiferaindica	Tree	11	Mango
17	Aegelmarmelos	Tree	01	Bael
18	Cocusnucifera	Tree	14	Coconut
19	Santalum album	Tree	01	Chandan
Tota	al		215	

❖ IN FRONT OF "I" BUILDING

1	Tridaxprocumbens	Herb	Undefined	Dagadpala
2	Helianthus anus	Herb	07	Suryaphul
3	Daturainnoxia	Shrub	05	Dhotara
4	Thujaorientalis	Shrub	08	Thuja
5	Ixoracoccinia	Shrub	02	Ixora
6	Cocusnucifera	Tree	12	Coconut
7	Delonixregia	Tree	07	Gulmohor
8	Tamarindusindica	Tree	04	Chinch
9	Ficusbenghalensis	Tree	02	Wad
10	Unknown I		05	
11	Unknown II		01	
12	Unknown III		02	
Total			55	

❖ FROM GIRLS HOSTEL TO GYMKHANA TEAK GARDEN

1	Xanthium sp.	Herb	29	Landaga
2	Alternanthera spp.	Herb	02	Chubukkata
3	Casiaquriculata	Herb	04	Tarwad
4	Euphorbia hirta	Herb	03	Dudhani
5	Datura sp.	Shrub	34	Dhotara
6	Annonasquamosa	Shrub	04	Sitaphal
7	Casia fistula	Shrub	01	Bahawa
8	Teconagrandis	Tree	1250	Sag (Teak)
9	Santalum album	Tree	02	Chandan
10	Azadirachtaindica	Tree	04	Kadunimb
11	Buteamonosperma	Tree	01	Palas
Tota	al		1334	

***** ZONAL STUDY OF THE CAMPUS

For the preparation of green audit activity students were also involved to keeping view that student will be aware about the plant diversity of college campus.

Student were separated group wise in 8 Zones, survey of the plant was carried out.

❖ ZONE:I

1	Yucca plant	Herb	01	Yucca
2	Hamelia patens	Herb	03	Hamelia
3	Tradescantiaspathacea	Herb	12	Rheo
4	Euphorbia hirta	Herb	08	Dudhani
5	Partheniumhysterophorum	Herb	25	Congress
6	Vincarosea	Herb	04	Sadaphuli
7	Croton spp	Herb	35	Croton
8	Aloe vera	Herb	01	Korphad
9	Murrayakoenigii	Shrub	08	kadipatta
10	Carica papaya	Shrub	01	papaya
11	Citrus lemon	Shrub	01	Lemon
12	Ixoracoccinea	Shrub	20	Ixora
13	Thujaorientalis	Shrub	04	Thuja
14	Mangiferaindica	Tree	01	Mango
15	Auracariacolumnaris	Tree	01	X-mas tree
16	Cycasroxburghii	Tree	12	Cycas
17	Punicagranatum	Tree	02	pomegranate
18	Cocusnucifera	Tree	05	coconut
19	Leucaenaleucacephala	Tree	20	Subabhul
20	Tamarindusindica	Tree	02	chinch
21	Hyophorbelagenicaulis	Tree	25	Bottle palm
22	Roystonearegia	Tree	04	Travel palm
23	Ficusracemosus	Tree	01	Umbar
Tota	ıl		196	

❖ ZONE-II

1	Tradescantiaspathacea	Herb	56	Spathodia
2	Partheniumheterophorum	Herb	23	Congress
3	Hamelia patens	Herb	03	Hemelia
4	Alpine yucca	Herb	01	Yucca
5	Cordia species	Herb	01	Cordia
6	Rosa indica	shrub	14	Gulab
7	Lantana camera	shrub	25	Ghaneri
8	Murrayakoenigii	Shrub	07	Kadipatta
9	Annonasquamosa	Shrub	01	Sitaphal
10	Hibiscus rosasinensis	Shrub	05	Jaswand
11	Cocusnucifera	Tree	02	Coconut
12	Azadirachtaindica	Tree	05	Kadunimb
13	Cycasroxburghii	Small Tree	01	Cycas
14	Psidiumguajava	Small Tree	01	Peru
15	Artabotryshexapetalus	Liana	02	Hirwachafa
16	Moringaoleifera	Small Tree	02	Shwega
17	Polyanthialongifolia	Tree	02	Ashok
18	Tectonagrandis	Tree	01	Saag
19	Millettiapinnata	Tree	01	Karanji
20	Podocarpusmacrophyllus	Tree	01	Kuchia
21	Caryotaurens	Tree	05	Fishtail palm
22	Aegelmarmelous	Tree	01	Bael
Total			161	

❖ ZONE -III

1	Tradescantiaspathacea	Herb	88	Rheo
2	Euphorbia hirta	Herb	45	Dudhani
3	Partheriumhysterophorum	Herb	20	Congress
4	Hamelia patens	Herb	01	Hamelia
5	Mimosa pudica	Herb	01	Lajalu
6	Aloe vera	Herb	01	Korphad
7	Opuntiaaurea	Herb	01	Opuntia
8	Tridaxprocumbens	Herb	04	Dagadpala
9	Euphorbia tirucali	Herb	01	Dudhani
10	Croton species	Herb	120	Croton
11	Dracaena species	Herb	02	Dracaena
12	Bougainvillea glabra	Liana	01	Boganvel
13	Citrus lemon	Shrub	01	Lemon
14	Annonasquamosa	Shrub	01	Sitaphal
15	Annonareticulata	Shrub	03	Ramphal
16	Lantana camara	Shrub	24	Ghaneri
17	Cactus species	Shrub	25	Cactus
18	Carica papaya	Small tree	01	Papaya
19	Cycasroxburghii	Small tree	05	Cycas

20	Moringaoleifera	Small tree	01	Shewga
21	Leucanaleucacephala	Tree	04	Subabhul
22	Erythrinavariegata	Tree	01	Panagara
23	Mangiferaindica	Tree	04	Mango
24	Hyophorbelagenicaulis	Tree	01	Bottle palm
25	Terminaliacatappa	Tree	02	Badam
Tot	al		338	

❖ ZONE IV

1	Partheniumhysterophorum	Herb	51	Congress
2	Hibiscus rosasinensis	Herb	03	Jaswand
3	Tridaxprocumbens	Herb	25	Dagadpala
4	Tradescantiaspathocea	Herb	01	Rheo
5	Thujaorientalis	Shrub	02	Thuja
6	Lantana camera	Shrub	02	Ghaneri
7	Annonasquamosa	Shrub	20	Sitaphal
8	Psidiumguajava	Small tree	01	Peru
9	Hyophorbelagenicaulis	Tree	04	Bottle palm
10	Grevilliarobusta	Tree	01	Grevillia
11	Clitoriaternatea	Tree	02	Akashnil
12	Ficuselastica	Tree	02	Rubber tree
Tota	al		114	

❖ ZONE – V

1	Tradescantiaspathacea	Herb	20	Rheo
2	Hibiscus rosasinensis	Herb	05	Jaswand
3	Thujaorientalis	Shrub	06	Thuja
4	Annonasquamosa	Shrub	01	Sitaphal
5	Hyophorbelagenicaulis	Tree	01	Bottle palm
6	Bambusa vulgaris	Tree	08	Bamboo
7	Cocusnucifera	Tree	01	Coconut
8	Ficusreligiosa	Tree	01	Pimpal
9	Clitoriaternatea	Tree	02	Akashnil
10	Tridaxprocumbens	Herb	05	Dagadpala
11	Cynodondactylon	Herb	105	Haral
12	Dhaturametel	Shrub	03	Dhotara
13	Bouganveliaglabra	Liana	02	Boganvel
14	Ficuselastica	Tree	03	Rubber tree
15	Cesalpiniapulcherima	Tree	01	Shankasur
16	Alstoniascholaris	Tree	02	Saptparni
17	Citrus lemon	Shrub	01	Lemon
18	Dacana species	Herb	01	Dacana
19	Ficusreligiosa	Tree	01	Pimpal
Tota	ıl		167	

❖ ZONE -VI

1	Partheniumhysterophorum	Herb	130	Congress
2	Cyanodondictydon	Herb	102	Haral
3	Alpine yucca	Herb	01	Yucca
4	Hydrilla	Herb	35	Hydrilla
5	Marsilea	Herb	25	Marsilea
6	Hibiscus rosa-sinensis	Herb	02	Jaswand
7	Tridaxprocumbens	Herb	05	Dagadpala
8	Tradescantiaspathocea	Herb	22	Rheo
9	Nelumbonucifera	Herb	30	Lotus
10	Tinosporacordifolia	Climber	22	Gulwel
11	Epipreminumaurenum	Climber	02	Money plant
12	Ixoracoccinia	Shrub	03	Ixora
13	Thujaorientalis	Shrub	14	Thuja
14	Bougainvelliaglabra	Liana	06	Boganvel
15	Cycasroxburghii	Tree	04	Cycas
16	Hyophorbelagenicaulis	Tree	02	Bottlepalm
17	Clitoriaternatea	Tree	04	Akashnil
18	Mangiferaindica	Tree	02	Mango
19	Alstoniascholaris	Tree	01	Alstonia
20	Artabotryshexapetalus	Tree	02	Hirwachafa
21	Micheliachampaca	Tree	10	Chafa
22	Plumeriaobusta	Tree	01	Plumeria
			Total- 425	

❖ ZONE – VII

1	Mangiferaindica	Tree	02	Mango
2	Partheniumhysterophorum	Herb	100	Congress
3	Cyanadondictydon Herb 100 Haral		Haral	
4	·		Alstonia	
5	Artabotryshexapeltus	hexapeltus Climber 03 Hirwachafa		Hirwachafa
6	Thujaorientalis	Shrub	13	Thuja
7	Ixoracoccinea	Shrub	03	Ixora
8	Clitoriaternatea	Tree	06	Akashnil
9	Tridaxprocumbens	Herb	03	Dagadpala
10	Caryotaurens	Tree	02	Fishtail palm
11	Alpine yucca	Herb	01	Yucca
12	Tinosporacordifolia	Climber	20	Gulwel
13	Euphorbia aurea	Climber	02	Money plant
14	Tradescantiaspathocea	Herb	20	Rheo
15	Terminaliacatappa	Tree	01	Badam
16	Micheliachampaka	Tree	10	Chafa
17	Plumeriaobusta	Shrub	01	Plumeria
18	Bougainvillea glabra	Liana	06	Boganvel
19	Marsilea	Herb	25	Marselia
20	Ficusracemosa	Tree	01	Umber
21	Adhatodavasica	Shrub	03	Adulasa
22	Annonasquamosa	Shrub	02	Sitaphal

23	Moringaoleifera	Tree	02	Shewga
24	Polyanthialongifolia	Tree	02	Ashok
			Total -329	

❖ ZONE –VIII

1	Artabotrysheterophylla	Tree	01	Jackfruit	
2	Syzygiumcumini	Tree	01	Jam	
3	Annonareticulata	Shrub	01	Ramphal	
4	Annonasquamosa	Shrub	02	Sitaphal	
5	Tridaxprocumbens	Herb	06		
6	Partheniumhysterophorum	Herb	36	Congress	
7	Bougainvillea glabra	Liana	03	Boganvel	
8	Cycasroxburghii	Tree	05	Cycas	
9	Cocusnucifera	Tree	03	Coconut	
10	Nyctanthesarbortristris	Tree	02	Prajakta	
11	Moringaoleifera	Tree	02	Shewga	
12	Hyophorbelagenicaulis	Tree	04	Bottlepalm	
13	Tinosporacordifolia	Climber	04	Gulwel	
14	Epipremiumaureum	Climber	03	Money plant	
15	Azadirachtaindica	Tree	01	Kadunimb	
16	Hibiscus rosasinensis	Shrub	02	Jaswand	
17	Cassia fistula	Tree	01	Casia	
18	Ixoracoccinia	Shrub	02	Ixora	
19	Callistemon viminalis	Tree	01	Bottle brush	
20	Thujaorientalis	Shrub	02	Thuja	
21	Tinosporacordifolia	Climber	04	Gulwel	
22	Mimosa pudica	Herb	02	Lajalu	
23	Clitoriaternatea	Tree	06	Gokarn	
24	Caryotaurens	Tree	02	Fishtail palm	
			Total -96		

Zone	Plant density
ZONE I	96
ZONE II	161
ZONE III	338
ZONE IV	114
ZONE V	167
ZONE VI	425
ZONE VII	329
ZONE VIII	96

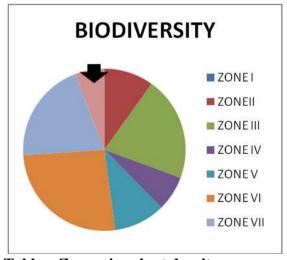
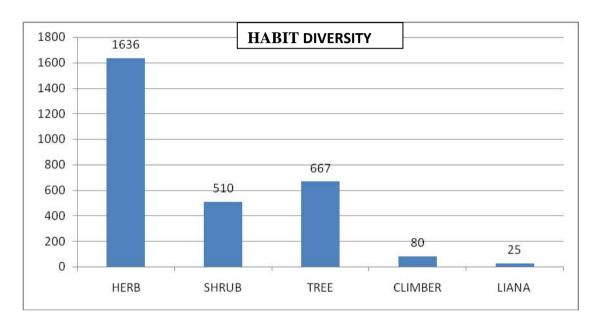


Table – Zone wise plant density.

***** TABLE- HABIT DIVERSITY IN PLANTS

SR NO	HABIT	NUMBER OF PLANTS
1	HERB	1636
2	SHRUB	510
3	TREES	667
4	CLIMBER	80
5	LIANA	25



Theme Localities:

Sr.	Theme	Location	Plants
No.			
1	Oxygen rich	Throughout the Campus	Tulsi, Pimpal,Neem
2	Beauty	Front of College Gate	Ficus, Croton, cynadon (Lawn grass), Shampion palm, Ixora.
3	Medicinal	Campus	Bahava, Adulsa, Tulsi, Ran
	Plants	•	Korpad,saagargota, bael, etc
4	Climbers	Compound Wall	Madhumalti , Gokarn, Gulvel
5	Shade	Avenue in the Campus	Teak, Melingtonia, Neem. Bakul, Almondetc .
6	Avenue	College road	Gulmohar,Akashneem,Rain-tree
7	Palms	Campus	Areca palm, fish-tail palm, Bottle palm
8	Gymnosperms	Campus	Cycas, Thuja, X-mas tree,
9	Pteridophytes	Campus	Nephrolepis

RESULT AND CONCLUSIONS:

R.B NarayanraoBorawake College Shrirampur, college campus is very rich in plant diversity creates healthy environment for day to day activity of the college.

There are 2918 total number of the plants in college campus categorized into 84 species among them herb plants are dominant and next to it trees are dominant which is followed by shrub, climber, lianas.

Recommendations:-

- 1) Select maximum indigenous species for plantation
- 2) Maximise the watering system through the drip irrigation.
- 3) Find the new area for plantation in the college area or nearby campus of the college.

SOLID WASTE MANAGEMENT:

Aim and objective:

- 1) Air pollution control
- 2) Disposal of solid organic waste
- 3) To control air, water, soil pollution
- 4) Production of green manure and vermin compost.

Activity:

Solid Waste is the organic waste obtain from canting, fallenLeaves etc. produce in this campus if it is not disposed properly it creates air pollution, to avoid this we have implemented solid waste management activity, we run it at two level **one** is decomposition of solid waste through the composting in pit, vermin-compost form solid organic waste and **second** is training to the students, farmers about production of organic manure like vermin compost, production of mushroom from the solid organic agricultural waste which ultimately conversion of Best from Waste, further the best biofertilizer is used for plants of college campus which enhances greenery leads environment clean and fresh.

Recommendations:-

- 1) Use plant litter such as dry leaves for mulching around the planted pits.
- 2) Encourage all student and staff member to minimize the of paper
- 3) Reuse the one side waste paper for notes or rough draftor notice etc.

WATER CONSERVATION:

Water conservations very key activity, water availability affects on the development of the campus as well as on all area of development such as farming, industries, etc with keeping this view water conservation activity is carried out.

In college campus water conservation is done at two levels

- 1. Rain Water Harvesting
- 2. Reuse of Waste Water

RAIN WATER HARVESTING:

Rain water harvesting (RWH) is a technique of collection and storage of rainwater into natural reservoirs or tanks, or the infiltration of surface water into subsurface aquifers (before it is lost as surface runoff). One method of rainwater harvesting is rooftop harvesting. With rooftop harvesting, most any surface — tiles, metal sheets, plastics, but not grass or palm leaf — can be used to intercept the flow of rainwater and provide a household with high-quality drinking water and year-round storage. Other uses include water for gardens, livestock, and irrigation, etc. The tanks also served as natural aquifers and helped recharge groundwater.

We are harvesting rain water by two methods

- 1) Rain water coolection from roof as distilled water for laboratory
- 2) Rain water harvesting for ground water recharge.
- 1) Rain water collection from roof as distilled water for laboratory

Aim and Objective:

1) Minimization of air and water pollution

2) Reuse of laboratory waste water

3) To fulfill the requirement of water for gardening

4) To minimize expenses on water for gardening

2) Rain water harvesting for ground water recharge.

Aim andObjectives:

1) Conservation of rain water for future use

2) Minimization of laboratory expenses to purchase distil water for practical in

thelaboratory

3)To userain water for gardening

Activity: Conservation of rain water in soil or in a container is known as rain-water

harvesting.

The rain water from entire college campus and roof top of building is flowing

according to slope of ground in college campus is accumulates in different three

places. These three natural sites are selected for rain water harvesting, ground water

recharge, and bore well recharge.

RECYCLING OF LABORATORYAND DOMESTIC WASTE WATER

Aim and Objective:

1) Minimization of air and water pollution

2)Reuse of laboratory waste water

3) To fulfill the requirement of water for gardening

4) To minimize expenses on water for gardening

Activity:

Due to lack of drainage facility of municipal council in Town College has

constructed 50000 liter capacity cement tank for storage of waste /sewage water.

After treatment this water is reuse for gardening and organic farming.

24

Dailyabout 100000litre of domestic waste water is collected and supplied for treatment in tank for the treatment it is circulated through pipe in garden for growing of plants in the campus which are the natural fan keeps environment clean and ecofriendly.

College campus includes hostel, school, senior college, staff quarter, ladies hostel, administrative building about 1530 Population live in this campus, due to lack of drainage system of the municipal council disposal of water was challenge for us ,but through the establishment of the waste water treatment plant, it became possible to avoid the air , water and soil pollution .

Recomondation:-

- 1) Maximized the activity of rain water harvesting on large scale
- 2) Scientific treatment mechanism should be established for the chemical laboratory sewage water.
- 3) Encourage and aware the student and staff for minimal use of water

ENERGY CONSERVATION

Aim and objective:

- 1) To saveconventionally produce electric energy
- 2) Use of non-conventional source of energy
- 3) Use carbon neutral electricity
- 4) Minimization of electric expenses

Activity:

Continuous power supply is the burning problem of the country, there is demandfor electricity from agriculture, industrial and household sectors .We have implemented energy conservationprogrammes as below.

- 1) Solar System
- 2) Use of CFL/LED Bulb, tube in the college building
- 3) Eco Friendly construction of College Building. No need of light on the day time and minimal use of fans.
- 4) We ensure that all electrical and electronic equipments such as computer are switched off when not in use and are generally confirmed in power saving mode and standby.

5) Encourage and aware the student and staff regarding to switch off the electric button when not necessary.

In college building daily about 50 unitelectricity is required, there is scarcity of electricity which is produce hydro power mechanism requires **fresh water** to generate it, and beside this it is cost ear, with keeping view to reduce use of fresh water for electricity and minimization of cost.

College has done energy audit report:- With keeping view to conservation of the energy / electricity.

Recommendation:-

- 1) Purchase the instrument/devices run with minimum consumption of energy i.e. environmentally sound appliances.
- 2) Still increase the solar panel

e-WASTE MANAGEMENT

Aim and objective:

E-waste is the future coming environmental problem will create hazards to our environment, it is non-degradable waste can pollute water, soil and air.

With keeping this view we are aware students and all staff about hazards effect of the e, waste on the health of man and ecosystem destruction, Waste material mainly metal, insulating materials present in the e-waste like CD, scrap mobile like devices, computer waste like monitor, CPU, mouse, Key board, cable and unused pen drive etc. are coated and deposed in scientific method

Activity:

With keeping view to minimize the pollution created through the e-waste, we have carried out the scientific disposal of e-waste by two ways

- Collection of e- wastes in e- waste box and sale it to concerned firm for its disposal.
- 2) Reuse of the component of unused electronic devices in laboratory viz. Physics.

Recomondation:-

1) Encourage and aware the student staff and stakeholder regarding hazards effect of e- waste by notice, workshop organization etc.

Environment awareness program:

Aim and objective:

- 1) To plan, organize and implement programmes like landscape and plantation, water management & conservation, and rain water harvesting.
- To provide education that prepares students for leadership and social responsibility teaching them to think and communicate effectively and develop a global awareness.
- 3) To introduce environmental education programmes for strengthen the existing ecological and environment related training infrastructure.
- 4) To provide consultancy to other institutions and organizations in for the establishment of similar institutions with a view to bringing sustainability.
- 5) To organize training programmes for vocationalisation of environmental careers.
- 6) To strengthen Global Environmental Education Programmes for standardization of greening activities.
- 7) To introduce environmental education programmes in strengthen the existing ecological and environment related training infrastructure.
- 8) To make special plans for the studies vermin culture, plantation, nursery development, water & energy conservation and management, rain water harvesting and other related fields.
- 9) To provide environmental education that prepares students for leadership and social responsibility by teaching them to think and communicate effectively and develop global environmental awareness and sensitivity. With keeping view to achieve aim and objective of the environmental program, we had implemented following activities.

National Service Scheme (NSS):

Aim and objective-

- 1) To create awareness about environment.
- 2) Activity: Tree plantation.
- 3) Swachh Bharat campaign
- 4) Slogan competition
- 5) Competition on preparation of Best from waste

Activity:-

Every Year our college organizes NSS camp in nearby village of college.

During the camp various activities related to the environment are implemented such as plantation, cleaning drive etc.

Paperless Technology:

Aim and objective:

- 1) Transaction without hard money.
- 2) Mobile Transactions
- 3) Easy and safe transactions.
- 4) Paperless functioning leads to forest conservation.

Activity:

All the staff having Adhar Card, Debit or Credit Card, The same may be used for purchasing anything.

Every department in our college having computer facility, we all mostly communicate with the student, staff members and stakeholders through the e-mail, messages, Whatsapp etc. in keeping the view of paperless technology

Recommendation:-

- 1) Aware student and staff for minimum use of the paper with notice and monitoring the same.
- 2) Make scientific arrangement for the event organized in college campus such as cultural event, workshop, seminar, conferences, NSS camp etc. where significant recyclable waste is likely to be produced

Educational tours:

Aim and objective:

Making the students aware of about the nature and cultural heritage.

Activity:

Every year we organized educational tour at different places for science as well as Geography for the study of various phenomenon, factor of surrounding environment and aware them regarding its importance in particular ecosystem.

Recommendation:-

1) Involve maximum student in environment based project and activities.

Photo-gallery

College Campus View:

Solid Waste Management: Canteen waste disposal by vermiculture





Organic composting pit:

Rainwater Harvesting:







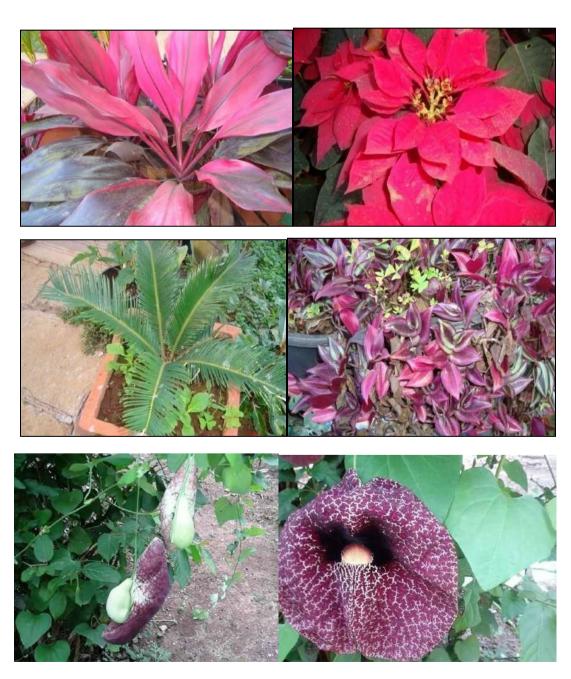








Beatutiful plants of the college campus:









No Vehicale Day in college campus:



