



S.K.R. GOVERNMENT DEGREE COLLEGE(WOMEN)
RAJAMAHENDRAVARAM(Estd.1968)

(Re- Accredited at B+Grade by NAAC, Affiliated to Adikavi Nannaya University)



POLICY DOCUMENT ON ENVIRONMENT AND ENERGY

The Environment and energy strategy is restricting to advance ecological mindfulness exercises by the establishment green grounds drive energy preservation and climate insurance exercises help to save energy and government assistance of climate.

Energy Audit is the first step which can be conducted within an Organization for the development of electrical energy efficient measures. The ultimate goal of the energy audit is to emphasize the concept of energy conservation in the campus of Educational Institute.

University Grants Commission (UGC) has made the mission "Green Campus", Clean Campus" mandatory for all higher educational Institutes. Realizing the need of being responsible towards the environment, NAAC (National Assessment and Accreditation Council) , an autonomous body under UGC has also included the concept of Environmental Audit in accreditation methodologies of State and Central Universities as well as Colleges.

As a part of this, S.K.R. Government Degree College (Women), has laid down some policies regarding energy savings which include:

- Minimize Energy Consumption by the use of energy efficient equipments.
- Maximum usage of Day Light.
- Usage of Natural Ventilation.
- Create awareness among students and staff about energy conservation.

To achieve these, the following methodologies were being followed / to be followed by the college.

- Training faculty, students to make the Institute as an efficient in energy conservation.
- Carry out regular internal energy audit.
- Inviting experts in the respective fields.
- Replace old electrical appliances with star rated equipment.
- LED Lights.
- Proper maintenance of equipment.


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ENERGY AUDIT FOR THE ACADEMIC YEAR 2022-2023

An **Energy Audit** is a survey conducted by an Energy Auditor to determine how much energy a building uses and identify ways to reduce energy consumption.

As per the energy conservation Act, 2001 [pass by the government of India], Energy audit is defined as “The verification , monitoring and analysis of the use of energy including submission of technical report containing recommendation for improving energy efficiency with cost benefit analysis and an action plan to reduce energy consumption consist of four phases.”

These are used to improve the **energy efficiency** of homes, businesses, and other buildings. An energy audit has three parts: evaluation, testing, and efficiency recommendations.

Evaluation

The first step is an evaluation of your building. This includes looking at past energy bills, your building's physical characteristics, and how it functions.

Testing

Once the Energy Auditor understands your building, they will conduct tests to see how much energy it uses.

Efficiency Recommendations

After the audit is complete, the Energy Auditor will provide you with recommendations on how to improve your building's energy efficiency. These may include changes to your heating and cooling system, insulation, windows, and doors.

Energy Audit Benefits

An Energy Audit can help you reduce the cost of your energy bills and make your home more comfortable. Aside from this, an Energy Audit will:

Determine Where Your Home's Energy Is Being Wasted

An Energy Audit will identify areas where your home is losing energy, such as through drafts, poor insulation, or inefficient windows.

Recommend Energy Efficiency Improvements

The Energy Auditor will provide recommendations based on the results of the Energy Audit that will save you money on your energy bills.

Identify Safety Concerns

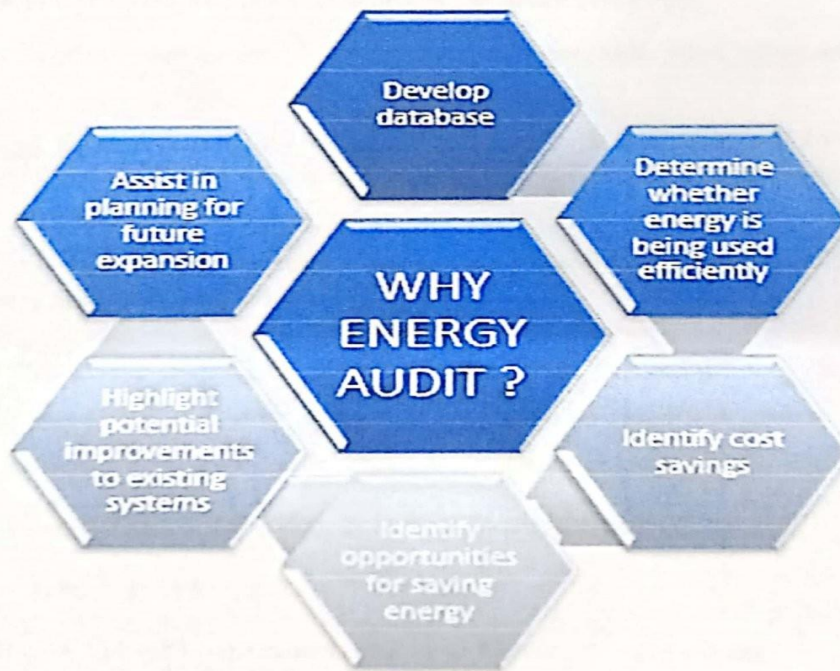
An Energy Audit can also identify safety concerns, such as carbon monoxide leaks or electrical hazards.

Make Your Home More Comfortable

Making your home more energy-efficient can also make it more comfortable. Sealing drafts and adding insulation can help to keep your home cooler in the summer and warmer in the winter.

Estimate Cost of Improvements

The Energy Auditor will provide you with an estimate of the cost of the energy efficiency improvements that they recommend. This can help you to decide which improvements are right for you.



A detailed energy audit conducted in the Educational Institute mainly aims at the following points:

- 1) To Assess present pattern of Energy Consumption and Relating Energy input and Production output.
- 2) To study CO₂ Emission.
- 3) To measure various Electrical parameters.
- 4) To assess the various equipment/facilities from Energy efficiency aspect and suggesting various measures to reduce electricity consumption and calculating Payback Period for same.

Energy: Modern civilization is possible because people have learned how to change energy from one form to another and then use it to work. People use energy to walk, and bicycle, to move cars along roads and boats through water, to cook food, to light our homes and offices, to manufacture products, and to send astronauts into space.

Energy is of different forms... Mechanical, sound, heat, light, wind, solar, tidal, electric and so on.

Electrical Energy: Electrical energy is defined as the energy generated by the movement of electrons from one point to another. The movement of charged particles along or through a wire constitute current or electricity.

People use electricity for lighting, heating, cooling and for operating appliances, computers, machinery and public transportation system.

Electric Power:

Electric power is defined as the *rate at which electrical energy is consumed*. It may also be defined as the rate at which an electric circuit transfers electrical energy per unit of time.

Electric Power P = Rate of doing work. In terms of Electrical quantities,

$$P = VI \quad (\text{OR}) \quad P = I^2R \quad (\text{OR}) \quad P = V^2 / R.$$

Where V is the Voltage, I is the current and R is the Electric resistance or Load.

The power consumption depends on the load. The more the electric equipment we use, more will be the power consumption.

For an A C circuit,

True Power = Apparent Power x Power Factor

Apparent power refers to RMS values of AC.

Use of electricity in Educational Institutes:

The two main purposes for educational institutes to need electricity is *lighting* and secondly, *use of computers for administrative purposes*. The most energy consuming appliances in educational institutes are the ventilation and air conditioning systems.

Educational Institutes usually get their electricity from a power plant which use a variety of energy resources to generate electricity, including fossil fuels (coal, oil and natural gas) and renewable energy sources(biomass, hydro power, solar and wind).

Let us calculate the electric energy consumption bill for a class room which uses 4 ceiling fans (each 75 watt) , 4 tube lights (each 40 watt) working for 8 hours per day on an average.

$$\begin{aligned} \text{Now, energy consumed per day} &= 4 * 75 \text{ W} * 8 \text{ h} + 4 * 40 \text{ W} * 8 \text{ h} \\ &= 2400 \text{ Wh} + 1280 \text{ Wh} \\ &= 3680 \text{ Wh} \\ &= 3.680 \text{ kWh.} \end{aligned}$$

Now, for a month of 25 working days,

$$\begin{aligned} \text{energy consumption} &= 3.680 \text{ kWh} * 25 \\ &= 92 \text{ kWh} \\ &= 92 \text{ units.} \end{aligned}$$

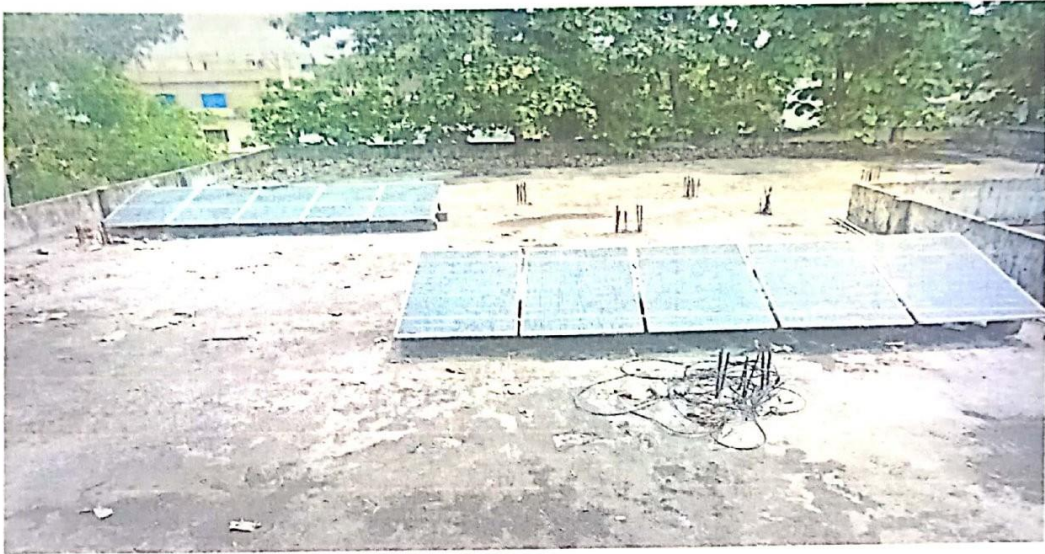
If each unit costs at Rs.12 (roughly),

$$\begin{aligned} \text{cost of consumption} &= 92 * \text{Rs.14 (approximately)} \\ &= \text{Rs. 1288.} \end{aligned}$$

This estimate is only for one class room. The number of class rooms may vary depending on the student strength of the college. Also an educational institute has Administrative Office, Library, Laboratories etc. So, the rate of power consumption goes on increasing.

Energy consumption (per day) in SKR Govt. Degree College (W), Rajahmundry.

S.NO	LOCATION/ PLACE OF USE	NAME OF ITEM / APPLIANCE	POWER RATING a	NO.OF ITEMS b	HOURS OF USAGE c	RATE OF CONSUMPTION (IN UNITS/ kWh) a*b*c
1	CLASS ROOMS	CEILING FANS	60 W	90	6	32.4
		TUBE LIGHTS	20W	90	6	10.8
2	SCIENCE LABS	CEILING FANS	60W	16	3	2.88
		TUBE LIGHTS	20W	32	3	1.92
		COMPUTERS	150W	20	3	9
		PRINTERS	150W	2	0.25	0.075
		A.C.	2kW	2	2	8
3	OFFICE INCLUDING PRINCIPAL ROOM	CEILING FANS	60W	8	8	3.84
		TUBE LIGHTS	20W	12	8	1.92
		COMPUTERS	150W	4	6	3.6
		PRINTERS	150W	4	0.5	0.3
		XEROX MACHINE	80W	2	1	0.16
4	STAFF ROOM	CEILING FANS	60W	10	4	2.4
		TUBE LIGHTS	20W	10	4	0.8
5	LIBRARY	CEILING FANS	60W	8	6	2.88
		TUBE LIGHTS	20W	10	6	1.2
6	PHYSICAL EDUCATIO N	CEILING FANS	60W	4	3	0.72
		TUBE LIGHTS	20W	5	3	0.3
7	DIGITAL CLASS ROOMS	CEILING FANS	65W	4	1	0.26
		TUBE LIGHTS	20W	6	1	0.12
		COMPUTER	150W	1	1	0.15
		PROJECTOR	150W	1	1	0.15
8	CAMPUS	SUBMERCIBLE PUMP-3	2 kW	3	5	30
9	CAMPUS	STREET LIGHTS-4	Replaced with Solar Lighting System.			



In addition, the College uses 8 (eight) refrigerators in various departments, Staff room and in Office.

Out of these 4 were replaced with star rated refrigerators provided by the donors.

For The Academic year 2022-23, the remaining 4 old refrigerators were also replaced with star rating ones.

A star rated refrigerator consumes 311 units per year. Per day, it comes out to be 0.85 units.

$8 \times 0.85 = 6.8$ units = 7 units (Rounded).

From the above table, it is clear that 114 units(Rounded) of electric power is being used in the College per day.

Now, total consumption is $114 + 7 = 121$ units.

Number of working days for the academic year 2021-2022 are 253.

121 units \times $253 = \underline{30,613}$ units.

The College has 6 different heads of power connections. In these 2 heads will come under Category- II and remaining 4 under Category-IV.

Category II costs Rs.14 per unit and Category IV approximately Rs.6 per unit.

On an average the cost of consumption per unit is Rs.10 (Rounded).

$30613 \times \text{Rs.}10 = \text{Rs. } 3,06,130.$

(Rupees three lakh six thousand one hundred thirty).

Per month it comes out to be Rs. 25,510

CO₂ Emission

One unit of electrical energy releases 0.8 kg of CO₂ in atmosphere.

Now, $30613 \times 0.8 = 24,490$ kg.

So, in a month the College is emitting 24,993 kg of Carbon dioxide into the atmosphere.

To compensate with this emission, the College is maintaining a medicinal plants garden and also the College has plenty of oxygen available from trees in the college campus.

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Energy Savings:



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Energy conservation is the effort to reduce useful energy consumption by using fewer energy services. This can be done by using energy more effectively (using less energy for continuous services) or changing one's behavior to use less service.

How to save Electricity in Educational Institutes:

1. Huge amounts of energy is wasted out in educational institutes because no one really cares about switching off the fans and lights when not required. Hence, planning workshops on energy conservation to educate students can generate huge results.
2. Educational Institutes have many areas where lighting is not required at all times. Installing sensor based lighting in such areas can generate massive rewards.
3. A large percentage of schools/ Colleges use traditional lighting products which are not energy efficient, wasting energy and money. To save electricity, they can shift from traditional lights to modern LED lights.
4. Most student sessions and classes happen during daytime. By avoiding artificial lighting on sunny days, schools/colleges can save electricity.
5. Replacing old computers with ones having energy efficiency certification is the easiest way to conserve energy at schools/colleges.
6. Investment in solar lights for outdoor lighting can generate long term benefits.

7. Conduct electricity conservation sessions for staff so that they can identify power wastage when they see it.

8. Unplug overhead projectors, computers, and smart boards when not in use. This simple way to conserve energy can help save large amount of power and money in the long run.

9. In case a new block is being added to the school/college property, make sure that power efficient lighting and fixtures are installed from the very beginning.

10. Traditional electrical appliances must be replaced with power efficient ones to reduce power consumption and waste. This is precisely how to save electricity at schools and educational centers.

11. Involve all the school/college community in the task of energy conservation. This is how the best schools/colleges save electricity and reduce their power bills.

12. Create student patrols and committees to make sure that energy conservation guidelines are being implemented.

13. Check the use of light fixtures beside windows and unused corners. Since schools/ colleges have large number of rooms, this can help in conserving energy at school/ college.

While the above are some of the best ways to save energy at educational institutes, there are many other ideas that can promote power savings in college premises.

In addition to the above mentioned factors, the College management has planned some measurements to reduce power consumption, which were planned to be implemented in a phased manner:

- (i) Replacing tube lights with LED lamps, which consume less power.
- (ii) Replacing old fans with newer and star rating fans, which consume less power.
- (iii) Replacing Window ACs with split ACs.
- (iv) Old Refrigerators to be replaced with star rated refrigerators which consume less power.
- (v) Replacing street lights with LED lamps and **solar lighting**.

(vi) Computer plugs and & power plugs are to be equipped with good earthing and reduced leakage currents.

(vii) Incandescent lamps to be replaced with energy efficient lamps.

(viii) Frequent checking of electrical wirings and replacing with new ones, wherever necessary.



Conclusion:

By replacing some of the tube lights with LED lamps, replacing some old fans with energy efficient fans , by replacing old refrigerators with star rated ones, and by installing solar lighting system in the campus there is a decline of 1367 units of power consumption in comparison the previous academic year (2021-2022).

So, with the methods implemented to reduce minimize power consumption, the college has shown a gradual decrease in the power consumption year by year.

This decrease in power consumption saves expenditure costs to the College and most importantly, decreases the emission of Carbon Dioxide into atmosphere.

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GREEN AUDIT REPORT



2022-2023



S K R GOVERNMENT DEGREE COLLEGE (WOMEN)

Phone : 9908542048

G.O.Ms.No. 28, Higher Education Department, Dated 10-08-2022

Re-Accredited at B+ Grade by NAAC
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Dr. P. Raghava Kumari

M.Sc., B.Ed., M.Phil., Ph.D

Principal

Rajamahendravaram,

12th June 2023

This is to certify that "Green Audit" was conducted for SKR Government Degree College (Women), Rajamahendravaram to evaluate the effectiveness of green campus maintenance programmes in 2023. The main objective is to assess the green initiatives and plans that had been implemented in the college campus such as Green Campus Management, plantations, Waste management, rainwater harvesting, and energy conservation.

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East Godavari Dist., Andhra Pradesh

Municipal Commissioner
HEALTH OFFICER
MUNICIPAL CORPORATION
RAJAMAHENDRAVARAM.

Audit Committee Members

- | | |
|-------------------------------|----------------------|
| • Dr.P.Raghava Kumari | Principal & Chairman |
| • Dr. B.Anuradha Surya Kumari | Co- Ordinator |
| • Dr.M.Sunitha | Member |
| • Mrs.K.Rama Devi | Member |
| • Mrs. M.Sri Devi | Member |
| • Ms. Ch.Priyanka | Member |

Introduction:

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. Now a days It is very important to an institution for self assessment towards environment and conservation. It aims to analyze environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience.

Green audit can be a useful tool for a college to determine how and where they are using the most energy or water or resources; the college can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. If self enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self enquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

Main Objective of Green Audit :

- Floral and Faunal diversity
- Energy conservation
- Waste disposal system
- e- waste management
- Rain water conservation

SKR Government Degree College (Women), Rajamahendravaram, One of the biggest and most reputed colleges in the state was established on 2nd September 1968 in the name and memory of Smt. Kandukuri Rajyalakshamma, The idle wife of Sri Kandukuri Veeresalingam panthulu garus.

Our college is a prominent Institution profoundly concerned and genuinely accepts that there is a need to resolve these major issues and opposite the patterns. College has undertaken some necessary environmental activities like plantation programmes, Vanam manam, save a tree save a life, seminars and awareness programmes related to environmental protection etc., Every year a no. of plantation activities have taken up faculty and students to maintain a healthy environment.

College campus is rich in Flora and Fauna. We are maintaining greenery and sustainability in the campus. It contains wide variety of plants, trees and so on. Different tree plantation programs are being conducted during the academic year of 2022- 2023 in the college grounds. The trees of the college have increased the quality of life. Not only the college as well as individuals around of the college as far as adding to our current circumstance by giving oxygen, further developing air quality, protection of water, safeguarding soil, and supporting natural life, controlling environment by directing the impacts of the sun, downpour and wind. Many animals and small organisms are dependent upon these trees primarily for food and safe house. To upgrade the environment condition, to reduce the amount of carbon dioxide levels from the environment, with the intension of reducing pollution and maintaining a healthy atmosphere in the campus, college has taken up various activities to create a more sustainable campus.

Observation:

Plant survey is conducted from February 2023 to May 2023. BZC II year students were divided into 4 groups and collected plant data on the assigned topics under the botany department guidance. The assigned topics were as follows: 1. Total number of herbs and no.of species present in the campus. 2. Total number of shrubs and no.of species present in the campus. 3. Total number of trees and no. of species present in the campus. 4. Total number of climbers and creepers and no.of species present in the campus. Based on this data, a report was formulated.

Green audit survey in the campus revealed that more than 203 species of plants are in the college campus. Out of 203 species 68 are trees, 66 are shrubs, 54 are herbs, 15 are creepers & climbers.

Herbs list

S.No	Common name	Scientific name	Family	Total Number
1	Asian Spider flower	Cleome viscosa	Cleomaceae	1010
2	Indian Mercury	Acalypha indica	Euphorbiaceae	700
3	Santa-Maria Fever few	Parthenium hysterophorus	Asteraceae	515
4	Desert horse purslane	Trianthema Portulacastrum	Aizoaceae	300
5	Gale of the wind	Phyllanthus niruri	Phyllanthaceae	215
6	Sweet broom	Scoparia dulcis	Plantaginaceae	610
7	Mexican fireplant	Euphorbia heterophylla	Euphorbiaceae	50
8	Benghal dayflower	Commelina benghalensis	Commelinaceae	100
9	Madras leaf-flower	Phyllanthus Maderas patensis	Phyllanthaceae	100
10	Mari Gold	Tagetes erecta	Asteraceae	9
11	Globe amaranth	Gomphrena globosa	Amaranthaceae	13
12	Fringed spider flower	Cleome rutidisperma	Cleomaceae	200
13	Common purslane	Portulaca oleracea	Portulacaceae	100
14	Wild jute	Corchorustrilocularis	Malvaceae	50
15	Saraswathi aaku	Centella asiatica	Apiaceae	21
16	Rangoon creeper	Quisqualis indica	Combretaceae	05
17	Caspét weed	Mollugo nudicaulis	Molluginaceae	300
18	Ceylon leadwort	Plumbago zeylanica	Plumbaginaceae	5
19	Chinese violet	Asystasia gangetica	Acanthaceae	100
20	Indian Long pepper	Piper longum	Piperaceae	50
21	Pendulous sedge	Carex pendula	Cyperaceae	1000
22	Cape gooseberry	Physalis peruviana	Solanaceae	20
23	Pellitory of the wall	Parietaria judaica	Urticaceae	2
24	Singapore Daisy	Sphagneticola trilobata	Asteraceae	300
25	Sahadevi	Vernonia cinerea	Asteraceae	500
26	Spider plant	Chlorophytum comosum	Asparagaceae	05
27	Nelavemu	Andrographis paniculata	Acanthaceae	17
28	West Indian Lemon grass	Cymbopogan citratus	Poaceae	05
29	Poison bulb	Crinum asiaticum	Amaryllidaceae	02
30	Fishtail palm	Caryota mitis	Aracaceae	01
31	Hoorah grass	Fimbristylis miliacea	Cyperaceae	600
32	Careless weed	Amaranthus palmeri	Amaranthaceae	50
33	Armgrass Millet	Brachiaria distachya	Poaceae	1100
34	Mustard	Brassica juncea	Brassicaceae	90
35	Red spiderling	Boerhavia diffusa	Nyctaginaceae	201
36	Ban tulsi	Croton bonplandianum Baill	Euphorbiaceae	30

37	Sweet Sage wort	Artemisia annua	Asteraceae	100
38	Prickly chaff-flower	Achyranthes aspera	Amaranthaceae	50
39	Tridax daisy	Tridax procumbens	Asteraceae	450
40	Asthma weed	Euphorbia hirta	Euphorbiaceae	570
41	Mountain knot grass	Aerva lanata	Amaranthaceae	730
42	Alligator weed	Alternanthera philoxeroides	Amaranthaceae	300
43	Kalabanda	Aloe vera	Liliaceae	5
44	Ginger	Zingiber officinale	Zingiberaceae	8
45	Turmeric	Curcuma longa	Zingiberaceae	5
46	Water lily	Nymphaea pubescens	Nymphaeaceae	4
47	Sweet flag	Acorus calamus	Acoraceae	21
48	Snap Ginger	Alpinia calcarata	Zingiberaceae	14
49	Indian sarsaparilla	Hemidesmus indicus	Asclepiadaceae	6
50	Elephant's Foot	Elephantopus scaber	Asteraceae	54
51	Bhringraj	Eclipta alba	Asteraceae	32
52	Wormwood	Artemisia absinthium	Asteraceae	1
53	Brahmi	Bacopa monnieri	Plantaginaceae	43
54	Insulin	Costus igneus	Costaceae	5

Shrubs List

S.No	Common name	Botanical name	Family	Total Number
1	Malli	Jasminum sambac	Oleaceae	5
2	Ganneru	Nerium oleander	Apocynaceae	2
3	Mandharam	Hibiscus rosa sinensis	Malvaceae	10
4	Nuruvarahalu	Ixora pavetta	Rubiaceae	10
5	Karivepaaku	Murraya koenigii	Rutaceae	30
6	Pink periwinkle	Catheranthus roseus	Apocynaceae	2
7	Paper flower	Bougainvillea spectabilis	Nyctaginaceae	5
8	Garden Croton	Codiaeum variegatum	Euphorbiaceae	10
9	Jujube	Ziziphus jujube	Rhamnaceae	20
10	Kanakambaram	Crossandra infundibuliformis	Acanthaceae	2
11	Sky flower	Duranta repens	Verbenaceae	19
12	Copperleaf	Acalypha wilkesiana	Euphorbiaceae	4
13	Blackboard tree	Alstonia scholaris	Apocynaceae	2
14	Juniper	Juniperus communis	Cupressaceae	4
15	Good luck plant	Cordyline fruticosa	Asparagaceae	10
16	Cabbage tree	Cordyline australis	Asparagaceae	4
17	Jelly leaf	Sida rhombifolia	Malvaceae	100

18	Rose cactus	Leuenbergeria bleo	Cactaceae	50
19	Ming aralia	Polyscias fruticosa	Araliaceae	5
20	Scarelet jungle flame	Ixora coccinea	Rubiaceae	19
21	Berlandier acacia	Acacia berlandieri	Fabaceae	25
22	Nag champa	Plumeria pudica	Apocynaceae	3
23	Jilledu	Calotropis procera	Asclepiadaceae	10
24	Sawara cypress	Chamaecyparis pisifera	Cupressaceae	2
25	Dracaena	Dracaena fragrans	Asparagaceae	4
26	Rose	Rosa rubiginosa	Rosaceae	4
27	Chinese evergreen	Aglaonema commutatum	Araceae	7
28	Henna	Lawsonia inarmis	Lythraceae	5
29	Indian Snakeroot	Rauvolfia serpentina	Apocynaceae	1
30	Castor oil plant	Ricinus communis	Euphorbiaceae	50
31	Tulasi	Ocimum tenuiflorum	Lamiaceae	100
32	Deadly night shade	Jatropha belladonna	Solanaceae	10
33	Orange jessamine	Murraya paniculata	Rutaceae	4
34	Purple sage	Leucophyllum frutescens	Scrophulariaceae	2
35	Crown of thorns	Euphorbia milii	Euphorbiaceae	2
36	Aroid palm	Zamioculcas zamiifolia	Aroid	2
37	Thuja	Platycladus orientalis	Cupressaceae	2
38	Poinsettia	Euphorbia pulcherrima	Euphorbiaceae	1
39	Zodia	Euodia cultivar	Rutaceae	2
40	Weeping lilli pilli	Syzygium floribundum	Myrtaceae	1
41	Thumbai	Leucas aspera	Lamiaceae	15
42	Bird of paradise	Strelitzia reginae	Streliziaceae	10
43	India abutilon	Abutilon indicum	Malvaceae	45
44	Shrub verbena	Lantana camara	Verbenaceae	20
45	Yellow oleander	Cascabela thevetia	Apocynaceae	1
46	Blue plumbago	Plumbago auriculata	Plumbaginaceae	10
47	Vempali	Tephrosia purpurea	Fabaceae	13
48	Euphorbia of the ancients	Euphorbia antiquorum	Euphorbiaceae	2
49	Opuntia	Opuntia decumanus	Euphorbiaceae	2
50	Brahma jemudu	Cereus jamacaru	Euphorbiaceae	4
51	Century plant	Agave americana	Asparagaceae	1
52	Bush mints	Hyptis suaveolens	Lamiaceae	46
53	Winter Daphne	Daphne odora	Thymelaeaceae	1
54	Champak	Artabotrys odoratissimus	Annonaceae	1
55	Malabar Nut	Adathoda zeylanica	Acanthaceae	2
56	Datura	Datura fastuosa	Solanaceae	1
57	Yellow Hedge Barleria	Barleria prionitis	Acanthaceae	1
58	Chilli	Capsicum annum	Solanaceae	7
59	Bellyache bush	Jatropha gossypifolia	Euphorbiaceae	2

60	Sweet basil	Ocimum basilicum	Lamiaceae	43
61	Vamu (Indian borage)	Coleus amboinicus	Lamiaceae	16
62	Chinese knotweed	Polygonum chinense	Polygonaceae	4
63	Black night shade	Solanum nigrum	Solanaceae	54
64	Yellow Berried Nightshade	Solanum xanthocarpum	Solanaceae	5
65	Star gooseberry	Sauropus androgynus	Euphorbiaceae	2
66	Ashwagandha	Withania somnifera	Solanaceae	4

Trees list

S.No	Common Name	Botanical Name	Family	Total Number
1	Maredu	Aegle marmelos	Rutaceae	7
2	Neem, Vepa	Azadirachta indica	Meliaceae	28
3	Coconut tree	Cocos nucifera	Arecaceae	56
4	Thokamalli	Millingtonia hortensis	Bignoniaceae	11
5	Indian almond	Terminalia catappa	Combretaceae	2
6	Ajasringi	Lanea coromandelica	Anacardiaceae	4
7	Aragvadha	Cassia javanica	Caesalpinaceae	2
8	Raavi Chettu	Ficus religiosa	Moraceae	6
9	Thurai	Delonix regia	Caesalpinaceae	10
10	Rose wood	Dalbergia latifolia	Fabaceae	13
11	Gangaravi	Thespesia populnea	Malvaceae	2
12	Pachhasunkesula	Peltophorum pterocarpum	Caesalpinaceae	8
13	Ganuga	Millettia pinnata	Fabaceae	34
14	Bogada	Mimosops elengi	Sapotaceae	9
15	Seema tangedu	Senna Siamea	Caesalpinaceae	3
16	Moduga	Butea monosprema	Fabaceae	2
17	Jack Fruit tree	Artocarpus heterophyllus	Moraceae	9
18	Tecoma	Tecoma stans	Bignoniaceae	2
19	Nidhra Ganneru	Enterolobium saman	Mimosaceae	5
20	Thogara	Morinda tinctoria	Rubiaceae	6
21	Teak	Tectona grandis	Lamiaceae	29
22	Seethaphalam	Annona squamosa	Annonaceae	8
23	Badminton Ball tree	Parkia biglandulosa	Fabaceae	1
24	Thellamadhi	Terminalia arjuna	Combretaceae	2
25	Rela	Cassia fistula	Caesalpinaceae	1
26	Sapota	Manilkara zapota	Sapotaceae	3
27	Onilahy Palm	Dypsis onilahensis	Palmaceae	6
28	Guava	Psidium guajava	Myrtaceae	11
29	Narinja	Citrus aurantium	Rutaceae	3

30	Mango	Mangifera indica	Anacardiaceae	141
31	Neredu	Syzygium cumini	Myrtaceae	3
32	fox tails	Wodyetia bifurcata	Arecaceae	28
33	Ashoka	Polyalthia longifolia	Annonaceae	17
34	Eucalyptus	Eucalyptus globulus	Myrtaceae	1
35	Banana	Musa paradisiaca	Musaceae	23
36	Pedda zuvvi	Ficus benjamine	Moraceae	9
37	Palm tree	Borassus flabellifer	Arecaceae	4
38	Water Apple	Syzygium aqueum	Myrtaceae	6
39	Rathi Usiri	Phyllanthus emblica	Phyllanthaceae	3
40	Karavera	Plumeria rubra	Apocynaceae	1
41	Thella kavera	Plumeria alba	Apocynaceae	1
42	Papaya	Carica papaya	Caricaceae	3
43	Cycas	Cycas revoluta	Cycadaceae	2
44	Usiri	Phyllanthus acidus	Phyllanthaceae	3
45	Oil palm	Elaeis guineensis	Arecaceae	2
46	Australian Thumma	Acacia spirorbis Labill	Leguminosae	1
47	Red Sanders	Pterocarpus santalinus	Fabaceae	4
48	Sapindus	Sapindus trifolatus	Sapindaceae	2
49	Deva kanchana	Bauhinia purpurea	Fabaceae	1
50	Vavili	Vitex negundo	Lamiaceae	2
51	Parijatham	Nyctanthes arbour-tristis	Oleaceae	1
52	Pala chettu	Manilkara hexandra	Sapotaceae	1
53	Jammi	Prosopis cineraria	Mimosaceae	1
54	Devakanchana	Bauhinia varigata	Fabaceae	3
55	Drum stick	Moringa oleifera	Moringaceae	5
56	Traveller's palm	Revenala madagascariensis	Strelitziaceae	8
57	Lemon	Citrus limon	Rutaceae	1
58	Buruga	Bombax ceiba	Malvaceae	3
59	Sampenga	Artabotrys odoratissimus	Annonaceae	1
60	Lakshmana phalam	Annona muricata	Annonaceae	1
61	All spice	Pimenta dioica	Myrtaceae	1
62	Champakamu	Michelia champaca	Magnoliaceae	1
63	Rudhraksha	Elaeocarpus ganitrus	Elaeocarpaceae	1
64	Gandhavardhanam	Gardenia jasminoides	Rubiaceae	1
65	Calophyllaceae	Ceylon ironwood	Mesua ferrea	3
66	Yellow oleander	Cascabela thevetia	Apocynaceae	1
67	Cinnamon	Cinnamomum verum	Lauraceae	1
68	West Indian pea	Sesbania grandiflora	Fabaceae	1

Climbers and Creepers

S.No	Common Name	Botanical Name	Family	Total Number
1	winter jasmine	Jasminum multiflorum	Oleaceae	1
2	Blue passionflower	Passiflora caerulea	Passifloraceae	1
3	Perfumed passionflower	Passiflora vitifolia	Passifloraceae	1
4	Rangoon creeper	Quisqualis indica	Combretaceae	1
5	Money plant	Epipremnum aureum	Araceae	5
6	Dhonda	Coccinia indica	Cucurbitaceae	16
7	Worm killer	Aristolochia bracteolata	Aristolochiaceae	30
8	Four-angled vine	Cissus quadrangularis	Vitaceae	10
9	Shanku pushpam	Clitoria ternata	Fabaceae	10
10	Ceylon spinach	Basella alba	Basellaceae	15
11	Indian Jalap	Operculina turpethum	Convolvulaceae	9
12	trellis-vine	Pergularia daemia	apocynaceae	12
13	Betel vine	Piper beetle	Piperaceae	6
14	White lady	Thunbergia fragrans	Acanthaceae	1
15	Gurmar	Gymnema sylvestre	Apocynaceae	1

Plants in College Campus

S.No	Habit	No.Of Varieties	No.of pants
1	Herbs	54	10,774
2	Shrubs	66	863
3	Trees	68	575
4	Climbers and creepers	15	119
Total		203	12,331

Dhanvanthari Medicinal Garden Plants List

S.No	Name of the plant	Family	Type of Plant	Part used	Medicinal uses
1	Achyranthes aspera	Amaranthaceae	Herb	Whole plant.	Asthama, Leprosy, Skin diseases, Anaemia.
2	Acorus calamus	Acoraceae	Herb	Rhizome	Epilepsy, Mental disorders, Skin diseases, Improves speaking ability.
3	Adhatoda zeylanica	Acanthaceae	Shrub	Leaves, Roots, Stem bark	Asthma, Menorrhagia, Psoriasis, Cough, Body inflammation
4	Aegle marmelos	Rutaceae	Tree	Root, Bark, Leaf, Seed.	Diarrhoea, Constipation, Cardiac diseases, High Blood Pressure, Jaundice, Joint Pains, Leprosy, Piles.
5	Aloe vera	Liliaceae	Herb	Leaf juice, Roots.	Leprosy, Piles, Mental disorders, Skin diseases, Jaundice, Menstrual problems, Dysentery, Joint pains.
6	Alpinia calcarata	Zingiberaceae	perennial Herb	Rhizomes	Diabetes, Arthritis, Obesity, Nervine tonic.
7	Annona squamosa	Annonaceae	Small Tree	Roots, Leaves, Fruits, Seeds.	Anaemia, Mental depression, Maligant Tumours, Hysteria, Antiulcerate, Tooth ache.
8	Aristolochia bracteolata	Aristolochiaceae	Creepers	Roots, Leaves	Anti-inflammatory Vulnerary Antiperiodic Eczema.
9	Artemisia vulgaris	Asteraceae	Herb	Leaves	Antihelmintic, Asthma, Antiseptic Nervous & Spanmodic affections Antilithic
10	Artemisia	Asteraceae	Herb	Flower	Chronic fevers,

	absinthium			heads	Swellings, Inflammation of liver, Rheumatism.
11	Bacopa monnieri	Plantaginaceae	Herb	Whole plant.	Cooling, Laxative, Inflammations, Epilepsy, Tumours, Ulcers, Leprosy, Leucoderma
12	Basella alba	Basellaceae	Creepers	Stems, Leaves.	Laxative, Haemostatic, Appetiser, Sedative, Diuretic, Demulcent, Maturate, Haemorrhages, Haemoptysis, Gonorrhoea.
13	Barleria Prionitis	Acanthaceae	Shrub	Leaves, Roots	Catarrhal affections, Glandular swelling, Tooth ache, Asthma, Skin diseases
14	Brassica juncea	Brassicaceae	annual herb	Seeds, Oil.	Dengue fever, Anorexia, Dyspepsia, Inflammation, Skin diseases, Splenomegaly, Persistent vomiting, Burning sensation, Colic, Hyperdipsia
15	Calotropis Procera	Asclepiadaceae	evergreen shrub	Root- Bark, Leaves, Flowers.	Leprosy
16	Capsicum annum	Solanaceae	annual shrub	Fruits	Dyspepsia, Flatulence, Cardiac debility, Dropsy, Cholera, Ulcers, Phlegm
17	Cascabela thevetia	Apocynaceae	Small tree	Bark, Seeds.	Purgative Seeds used for suicidal and homicidal purpose.
18	Catharanthus roseus	Apocynaceae	Shrub	whole plant.	Blood cancer, Sedative, Hypotensive, Diabetes, Stomachic tonic, Wasp

					stungs, Menorrhagia
19	Centella asiatica	Apiaceae	Perennial herb	whole plant.	Anxiety, Neurosis, Minor memory disturbances, As a Psychotropic agent, Memory enhancer, General debility, Jaundice, Leprosy.
20	Cinnamomum verum	Lauraceae	evergreen tree	Bark, Twigs, Leaves.	Diarrhoea, Gastric, Flatulence, Nausea, Vomiting
21	Cissus quadrangularis	Vitaceae	Creepers	Stems	Bone Fractures, Dyspepsia, General weakness.
22	Clitoria ternata	Fabaceae	Creepers	Roots, Leaves, Seeds.	Weakness of sight, Dropsy, Ascites, Bronchitis, Constipation.
23	Coffea arabica	Rubiaceae	perennial shrub	Seeds	Stimulant, Diuretic, Antipyretic, Whooping, Cough, Hysteria.
24	Withania somnifera	Solanaceae	Shrub	Roots & Leaves	Nervine sedative, Aphrodisiac, Improving vitality, to cure sterility of women, sore eyes.
25	Curcuma longa	Zingiberaceae	Herb	Rhizomes	Urticaria and skin allergy, Viral hepatitis, Inflammatory conditions of Joints, Sore throat, - Wounds.
26	Cymbopogon citratus	Poaceae	perennial herb	Leaves	Source of vitamin-A Leprosy, Epilepsy, Mosquito repellent creams.
27	Datura fastuosa	Solanaceae	Shrub	Leaves, Seeds.	Narcotic, Antispasmodic, Mydriatic, Anodyne
28	Eclipta alba	Asteraceae	Herb	Seeds, Juice of leaves,	Viral hepatitis, Hair hygiene, Memory

				Herb oil	disorders, Minor cuts and burns, Conjunctivitis.
29	Elephantopus scaber	Asteraceae	perennial herb	Roots, Leaves, Flowers.	Bile, Phlegm, Urethral discharges, Dysuria, Heart diseases.
30	Euphorbia nivulia	Euphorbiaceae	Shrub	Stems, Leaves.	Rheumatism, Hydrophobia
31	Hemidesmus indicus	Asclepiadaceae	semi-erect shrub	Roots	Diuretic, Stimulate Lactation, General weakness, Skin burning, Tooth ache
32	Hibiscus rosa-sinensis	Malvaceae	Small tree	Flowers, Roots.	Menorrhagia, Oral contraceptive, Hair tonic, Gonorrhoea, Jaundice
33	Jasminum sambac	Oleaceae	small shrub	Roots, Leaves, Flowers.	Insanity, Eye complaints, Pruritus, Leprosy, Ulcers, Hiccough, Galactorrhoea, Fever, Skin diseases
34	Jatropha gossypifolia	Euphorbiaceae	Shrub	Roots, Leaves, Seeds, oil.	Ophthalmia, Rheumatism, Paralysis, Enlargement of Spleen and Liver
35	Manilkara hexandra	Sapotaceae	Tree	Bark, Fruits.	Loss of Consciousness, Anorexia, Ulcers, Opacity of the Cornea, Odontopathy, Fever, Flatulence, ColicDyspensia
36	Operculina turpethum	Convolvulaceae	Climber	Roots, Stem Bark	Constipation, Flatulence, Fever, Obesity

37	Murraya koenigii	Rutaceae	Tree	Leaves, Roots, Bark.	Helminthiasis, Dyspepsia, Colic, Flatulence, Diarrhoea, Dysentery, Vomitings, Hair tonic, Stomach ache.
38	Musa paradisiaca	Musaceae	perennial herb	Leaves, Roots, Fruits, Stem.	Burns and Ulcers, Gonorrhoea, Menorrhagia, Anaemia, Aphrodisiac, Demulcent, Haemophysis
39	Nyctanthes arbor-tristis	Oleaceae	shrub	Leaves, Flowers, Seeds.	Sciatica, Eye diseases, Scurvy, Chronic fever, Bronchitis, Dyspepsia, Hepatopathy, Greyness of Hair and baldness
40	Ocimum tenuiflorum	Lamiaceae	Shrub	Leaves, Roots, Seeds.	Common cold and cough, Bronchospasm, General debility and Stress disorders, Skin infections, Wounds, Indigestion and Nausea
41	Ocimum basilicum	Lamiaceae	Shrub	Whole Plant.	Sprains, Asthma, Diarrhoea, Dysentery, Bronchitis, Gonorrhoea, Nephritis, Internal piles
42	Pergularia daemia	Apocyanaceae	Creepers	Whole Plant	Pulmonary affections, Asthma, Biliousness, Insanity, Leprosy, Gonorrhoea, Tuberculosis, Prickings in the uterus, Piles, Nervous affections, Syphilis
43	Piper betle	Piperaceae	Creepers	Whole Plant	Antiseptic, Aphrodisiac, Expectorant, Bronchitis, Impotency,

					Rheumatism, Vitiated conditions of Kapah, Stimulant, Acts Synergistically upon central nervous system, Wounds, Diphtheria, Carminative
44	Piper longum	Piperaceae	Climbing shrub	Fruit, Root and Stem.	Bronchial asthma, Recurrent infection of Throat, Flatulence, Dyspepsia, Respiratory diseases, Analgesic, Carminative, Sedative, Insomnia, Epilepsy, Abortifacient
45	Coleus amboinicus	Lamiaceae	Shrub	Leaves	Asthma, Cough, Epileps Leaf juice is antidote for centipede poison (external application)
46	Plumbago auriculata	Plumbaginaceae	shrub	Roots	Bronchitis, Cough, Leprosy Removes warts, As a styptic in scrofula , Powered root used like snuff.
47	Polygonum chinense	Polygonaceae	Shrub	Whole Plant	Tonic, Antiscorbutic, Vulnerary
48	Rauvolfia serpentina	Apocynaceae	Shrub	Roots, Leaves	Snake bite, Rheumatism, Hypertensive, Posion, Epilepsy, Eczema, Leaves used in removal of opacityies of the cornea
49	Sesbania grandiflora	Fabaceae	Tree	Root bark, Leaves, Flowers,	Tonic, Anthelmintic, Scabies, Dyspepsia, Diunetis, Nasal catarrh,

				Fruits.	Nyctalopia, Anaemia, Aperient, Scabies
50	Solanum nigram	Solanaceae	Shrub	Whole Plant	Asthma, Bronchitis, Sedative, Rheumatagia, Nephropathy, General debility, Anti-dysentery
51	Solanum xanthocarpum	Solanaceae	Shrub	Whole Plant	Anthelmintic, Carminative, Appetiser, Diuretic, Arthralgia, Hyper tension, Pharyngitis, Cardiac disorders, Rhinopathy, Cough, Sore throat
52	Sauropus androgynus	Euphorbiaceae	Shrub	Leaves	Source of various vitamins except vitamin-D
53	Vitex negundo	Lamiaceae	Tree	Whole Plant	Rheumatic swellings , Increase hair growth, Bronchitis, Verminosis, Weakness of sight, Malarial fever, Cardiac disorders, Diarrhea
54	Zingiber officinale	Zingiberaceae	Herb	Rhizomes	Asthma, Worms, Leprosy, Skin diseases, Pharyngopathy, Cholera, Carminative, Nasea
55	Costus igneus	Costaceae	Herb	Leaves	Antidiabetic, Male sterility, Antibacterial, Asthama, Bronchitis, Skin dieeases
56	Aerva lanata	Amaranthaceae	Herb	Whole plant	Urinary calculi, Dysuria, Wounds, Polyurea, Piles, Uterine diseases, leucorrhoea
57	Euphorbia hirta	Euphorbiaceae	Herb	Whole Plant	Asthma, Cough, Dysentery, Latex applied to worts, Leprosy, Ulcers,

					Fissures in the mouth
58	Leucas aspera	Lamiaceae	Annual herb	Leaves, Flowers, Roots.	Psora, Chronic eruptions, Epilepsy, Headche, Snake bite, Rheumatism, Swellings, Jaundice, Asthama, Bowel complaints, Conjunctivitis
59	Thunbergia fragrans	Acanthaceae	perennial climbing twiner	Root, stem, Leaves	Antibacterial, Skin diseases, Rheumatic arthralgia.
60	Gymnema sylvestre	Asclepiadaceae	Climber	Leaves	Snake Bite, Enlargement of Liver , Cardiac Stimulant, Diabetes, Diuretic, Malarial Fevër, Eye Diseases
61	Andrographis paniculata	Acanthaceae	Shrub	Whole plant	Antipyretic, Antiperiodic, Anti-inflammatory, Ulcers, Cronic, fevers, Bronchitis, Skin diseases, Leprosy, Jaundice, Haemorrhoids, Intestinal worms
62	Phyllanthus emblica	Euphorbiaceae	Tree	Fruits	diarrhea, jaundice, and inflammation, Hair tonics

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