

Green Audit 2020-2021



Swami Shukdevanand College

NAAC Accredited "B+" Grade Institution

(Affiliated to M.J.P. Rohilkhand University, Bareilly, Recognised u/s 2 (f) 12 (B) of UGC Act)
Mumukshu Ashram Shahjahanpur-242228 (U.P.)



INTRODUCTION TO GREEN AUDIT

Green Audit is a method to systematically define, quantify, track, monitor and evaluate the components of environmental diversity of the Institute. It seeks to assess sustainable activities inside and outside the region concerned and would have an impact on the environmentally friendly environment. A green audit is a valuable way for a college to evaluate how and where most energy or water or other resources are used; then the college will decide ways to improve and save. It will build understanding of wellbeing and foster environmental knowledge, values and ethics. It provides a greater image of the Green effect on campus for employees and students. It may also be argued that it is structural if self-examination is a natural and necessary result of quality schooling.

It is therefore necessary that the college evaluate its own contributions to a sustainable future. The role of higher education institutions in relation to environmental sustainability is more prevalent as environmental sustainability is becoming an increasingly important issue for the country. Several environmental and ecological issues have arisen from rapid urbanisation and economic growth at local, regional and global levels. In this sense, the Green Campus framework for universities that can contribute to economic growth and at the same time remove a large amount of ambient CO₂ from the atmosphere must be implemented. The National Assessment and Accreditation Board, New Delhi (NAAC) has made it mandatory for an annual Green Audit Report to be submitted to all higher education institutions. In addition, it is part of the Higher Educational Institutions' Corporate Social Duty to ensure that they commit to reducing global warming by carbon footprint mitigation initiatives.

About Swami Shukdevanand College, Shahjahanpur:

Swami Shukdevanand College was established by Late Shri Swami Shukdevanand Saraswati Ji Maharaj in 1964. As a great visionary of the beautiful society of free India, he was committed to develop spirituality, morality, scientific approach, and commitment among the students to turn them into qualified and sincere citizens. With the glorious talent show in the field of Arts, Science and Education, the institute continued its journey for years towards the progress path under the presidency, skilled leadership, and direction of Late Shri Swami Shukdevanand Ji Saraswati. In 1982, new possibilities were explored when Late Shri Swami Shashwatanand Ji Saraswati became its president. The efforts of the new management committee bore fruits with the addition of B Com courses in 1985. With the constant efforts of the present President Shri Swami Chinmayanand Saraswati Ji, the then Secretary Pramod Chandra Seth and Manager and Principal, Dr Soti Shivendra Chandra, the College got the permission from the government to run M Ed and M Com courses. Shri Swami Shukdevanand auditorium, seminar hall and educational techniques and psychological laboratory were constructed under the directions of Swami Chinmayanand Saraswati and determined efforts of the secretary Dr Ravi Mohan, which were inaugurated by the then Governor Acharya Shri Vishnukant Shastri. A complete new look was given to

the library and reading room in 2003, when it was constructed with all the facilities. Various lecture halls, lecture theatres, and indoor stadium were built in the year 2004 and were inaugurated on February 26, 2006, by the ex president of NCERT, Dr JS Rajpoot, and the then director of higher education, Dr RK Baslas. Administrative building of the College was renovated in 2004-2005. The College got the approval for botany and zoology subjects from the university and started its classes from 2006-2007. Staff room for arts and commerce faculties, 14 lecture halls on the second floor and other important halls were constructed in 2007-2008. A huge statue of Late Swami Shukdevanand Ji was established at the centre of the college lawn by the progressive saints of the nation on February 25, 2008. PGDCA and BCA classes were started from July 2008. BP Ed classes are also under proposal. New laboratories for Chemistry, Zoology and Botany have been constructed and other lecture halls are under construction. Beautification work for the College remains constantly under progress. In the year 2009, BBA Program was commenced. Besides, B.Com (Finance) and B.Com. (Hons.) programs were also started in the year 2013. After two years in 2015, seven postgraduate courses in Arts streams and Five Postgraduate courses in Science stream were launched. And recently in the year 2016, one more self-financed unite of B.Ed. was started in the College. The College has four sister concerns namely Daivi Sampad Mahavidyalaya, D.S. Inter College, S.S. Law College and Sri Shankar Mumukshu Vidyapeeth covering 50 acre of land. The College takes pride in proclaiming that each year, many students of the College take Chancellor's medal. The NCC and NSS unit of the College have been doing commendably well in arousing the National Spirit as well as social and patriotic awareness among the youth of the society.

In association with government departments like Social Forestry of District Shahjahanpur, NGOs, and other institutes, the College has undertaken several extension and outreach programmes. Activities such as environment conservation and preservation, healthcare, legal literacy, plantation, and awareness programs on Environmental protection etc., have been conducted in collaboration with governmental and non- governmental organizations. In order to bring up a generation with moral integrity and to promote democratic values, Swami Shukdevanand College organizes talks by experts for the Staff and students. Welfare and charity programmes undertaken for the benefit of the students and the community make the students aware of altruism.

Vision and Mission Statements of the College

Vision of the College:

To be a dynamic organisation contributing to a transformed, equitable, and quality higher education and training system in India

Mission:

Initiates critical discourse on contemporary higher education issues, leads and manages quality assurance in higher education. Researches and monitors trends and developments in the area of education.

Values:

In pursuit of its vision and mission the College is committed to and guided by the following values.

1. Social Justice
2. Quality
3. Integrity
4. Accountability
5. Spirituality

Green Audit Committee:

S.N	NAME	SIGNECHAR
01.	Dr. Madhukar Shyam Shukla (In - Charge)	
02.	Dr. Deepak Singh (CO- Incharge)	
03.	Dr. K.K.Mishra	
04.	Shri. Mridul Patel	
05.	Dr. Manoj Kumar Mishra	
06.	Dr. Mumutaz Hussain	
07.	Dr. Santosh Pratap singh	
08.	Miss. Brij Lally	
09.	Miss. Aparna Tripathi	

Green Audit Agency: (MoU to be prepared)

Prithvi is a leading environmental research and education organization in Kerala, with several national and international linkages. *Prithvi* is the pioneer co-operative venture of college and university teachers, scientists, and professionals for the cause of nature and conservation of natural resources and environmental protection. After consultation with *Prithvi*, a Memorandum of Understanding was prepared between SS College, Shahjahanpur and *Prithvi* to provide training for the conduct of Green Audit and equip the students to complete the report.

Management Support

The SS College management and Governing Council extended wholehearted support and commitment in conducting Green Audit during the pre-audit meeting. The management decided to carry-out various environment-friendly programs such as efficient energy and water use practices, energy-efficient electronic and computer goods purchase, proper segregation and waste disposable methods, water conservation methods, medicinal garden, planting tree saplings, distribution of tree saplings to the community, observation of environment-related days, nature camps, field trips, environmental club activities soon and so forth. The management is also keen to implement sustainable practices based on finding and suggestions from the Green Audit report. The management of the College is fully committed to teaching virtues amongst students in the conservation and preservation of nature. The management of the College supports the various departments and the various extension activities of NSS and NCC for the plantation and is always ready to actualize the novel ideas of them.

Scope and Goals of Green Auditing

A green audit serves as a means to identify opportunities for sustainable development practices, enhance environmental quality, improve health, hygiene and safety, reduce liabilities and save money and achieve values of virtue. Environmental audits can be a highly valuable tool for College in a wide range of ways to improve their ecological and economic performance and reputation—while reducing wastages and operating costs. Once a baseline data is prepared after the auditing process, the data can serve as a point of departure for further action in campus greening. It will also help the College to compare its programmes and activities with other peer institutions, identify areas for improvement, and prioritize the implementation of future projects. The data will also provide a basis for calculating the economic benefits of resource conservation projects by establishing the current rates of resource use and their associated costs.

Simple but effective system was devised and applied to prepare baseline data and monitor the environmental performance of SS College, Shahjahanpur. The aim of green auditing is to help the institution to apply sustainable development practices and to set examples before the community and young learners.

OBJECTIVES:

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of carrying out Green Audit are:

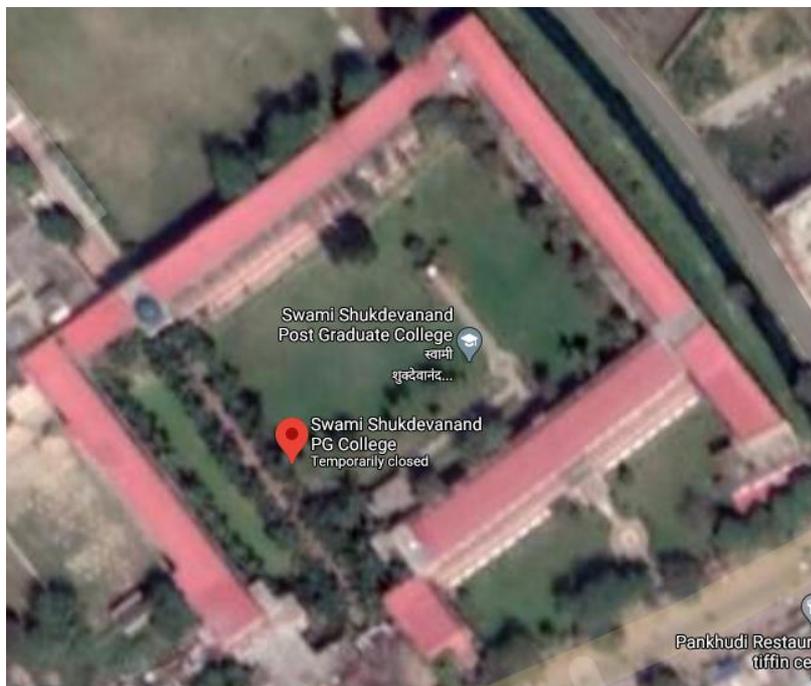
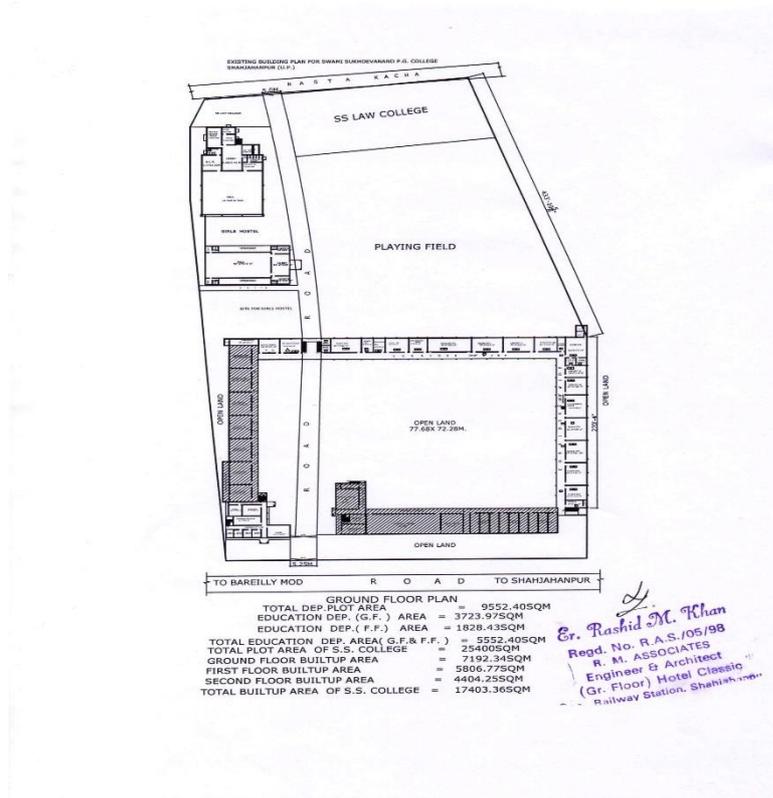
- To map the Geographical Location of the college
- To document the floral and faunal diversity of the college
- To document the ambient environmental condition of weather, air, water and noise of the college
- To document the waste disposal system
- To estimate the Energy requirements of the college.

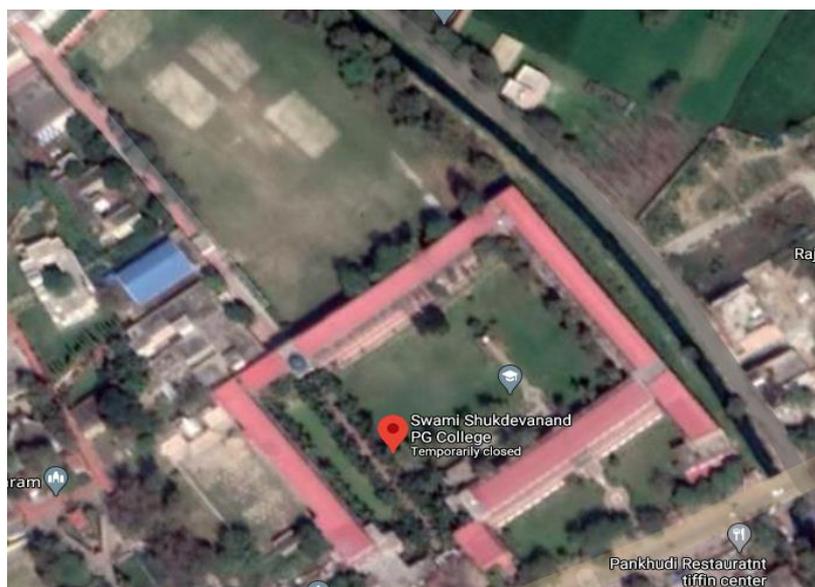
METHODOLOGY:

The purpose of the green audit of SS College, Shahjahanpur is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes: collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

Campus Infrastructure:

College map:





About College Campus:

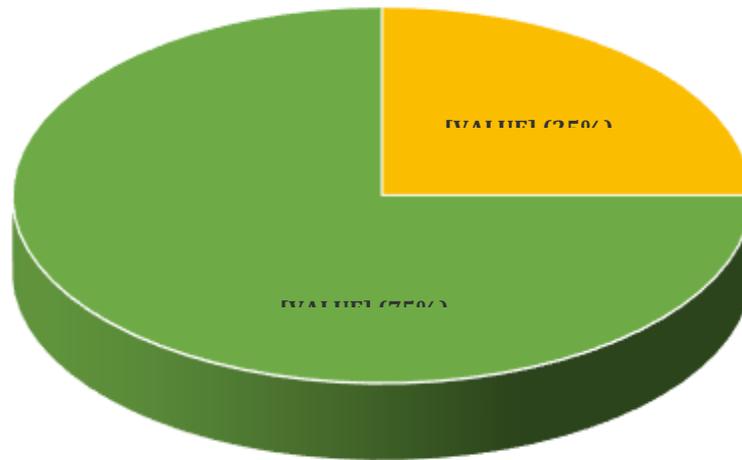
The college campus area has 28960 sqmt situated on the bank of Garra river. The College is well-connected by rail and road. Spread over 18 acres, the College has 54 classrooms in which 08 classrooms are newly created. The College has 04 labs and Three spacious seminar halls. Besides, UG and PG labs, library, central computer lab, administrative offices, Principal's room, etc. The following table gives details.

LAND USE DATA OF SS College, Shahjahanpur

<i>CATEGORIES OF LAND USE</i>	<i>AREA (m²)</i>
PLANTATION AREA	16977.41
BUILT UP AREA (INCLUDE ROADS)	11982.59
TOTAL AREA	28960

LAND USE ANALYSIS

SRI RAMA ENGINEERING COLLEGE



■ Built Up Area (Sq) ■ Plantation Area (Sq)

	Name of Building	Purpose
1.	Admin Block (Swami Dahrmanand Block)	Principal room, restroom of the Principal, recreation room with attached washroom. Steno's office, Clerk room/facilitation room, Scholarship clerk room, Admission kiosk, Accountant's room, fees collection room, Salary/service clerk room, washrooms management conference room.
2.	Library	Library, reading room, Library office, Librarian's room,

2.	Science Block	PG class rooms for Physics, Chemistry, zoology and botany classes, Laboratory, Audio- visual room,
3.	Arts block	UG and PG class rooms of all the subjects of BA
4.	New block	Office of NSS, washroom, answer sheet collection etc.
5.	Commerce block (Old)	UG/PG classrooms, seminar hall, conference room and seminar hall.
6.	Teacher Education block	UG/PG classrooms, technology room, psychological lab, language lab, Grievances and redressal cell, SST Lab, Science lab, Art and craft room etc.
7.	Auditorium	Common functions and Indoor Court
8.	Canteen	Food and snacks for stakeholders
9.	Girls' restroom	Restroom for girls and Women staff.
10.	Women's Hostel	
11.	OBC Girls Hostel	
12.	SC Girls hostel	Women Staff and Girls Hostel for the girls of SC Community
13.	Playground	Sprawling playground for games

Pre-audit Stage

The Governing Council of the SS College asked the Principal to find a suitable organization to provide training and support regarding Green Audit. The Principal in the Staff Meeting authorized the Biodiversity Club to find and conduct the audit process. After consultation with quite a few agencies, the Principal, along with Biodiversity Club and IQAC decided to render the expertise of Prithvi, an environmental research and action Nongovernmental Organisation situated in Shahjahanpur, UP.

Green Audit Training by Prithvi

Prithvi provided the training for Staff and students on 12th September, 2017. The program was inaugurated by Dr. Suresh Mishra, the scientist of Cane Research Institute, Shahjahanpur. The Principal of SS College, Dr. A.K. Mishra presided the meeting, and Dr. Vikas Khurana from Prithvi and IQAC Co-ordinator Dr. Anurag Agarwal felicitated the gathering. The selected 50 students, teacher co-ordinators, attended the following training sessions, which will last till evening.

A tentative schedule for the day is given below:

10.00AM	:	Tea Break
10.10 AM -12.30	:	Noon Energy Audit Training
12.30 Noon	:	Practical session (mock audit of water and energy)
03.00PM	:	Water audit training
04.15PM	:	Valedictory Session

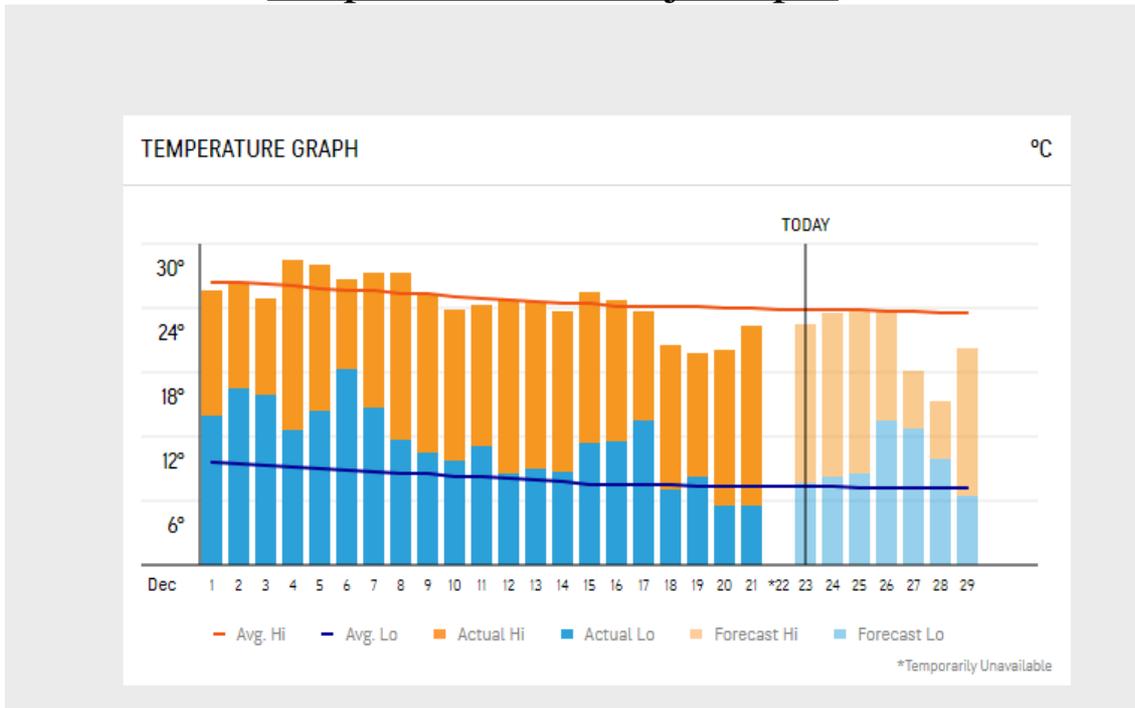
The students were divided into three groups of 18-20 students each, soon after the inaugural session for three audits. One student co-ordinator and assistant co-ordinator was selected for each group. The schedule of various audits, time table, and duty assignments for each student was fixed and assigned. Weekly progress and monitoring meeting was arranged regularly.

Green Audit Training Pictures (To be updated)

Flora of SS College:



Air pollution in shahjahanpur



Weather of Shahjahanpur:

Climate data for Shahjahanpur (1981–2010, extremes 1977–2012)													[hide]
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	28.3 (82.9)	32.8 (91.0)	38.8 (101.8)	43.4 (110.1)	45.0 (113.0)	46.2 (115.2)	43.2 (109.8)	39.5 (103.1)	37.5 (99.5)	37.4 (99.3)	33.5 (92.3)	28.7 (83.7)	46.2 (115.2)
Average high °C (°F)	20.3 (68.5)	24.1 (75.4)	29.7 (85.5)	36.2 (97.2)	38.2 (100.8)	37.3 (99.1)	33.4 (92.1)	32.7 (90.9)	32.2 (90.0)	31.6 (88.9)	28.0 (82.4)	22.9 (73.2)	30.6 (87.1)
Average low °C (°F)	7.1 (44.8)	9.9 (49.8)	14.1 (57.4)	19.5 (67.1)	23.9 (75.0)	25.8 (78.4)	25.7 (78.3)	25.4 (77.7)	23.8 (74.8)	18.0 (64.4)	11.8 (53.2)	8.0 (46.4)	17.7 (63.9)
Record low °C (°F)	0.6 (33.1)	2.6 (36.7)	6.0 (42.8)	8.4 (47.1)	15.6 (60.1)	17.0 (62.6)	20.1 (68.2)	20.0 (68.0)	15.0 (59.0)	8.4 (47.1)	5.0 (41.0)	1.2 (34.2)	0.6 (33.1)
Average rainfall	14.6	21.6	9.8	11.6	30.2	133.1	289.3	239.9	198.0	38.2	2.7	10.9	999.9

Source: Wikipedia

Water Report of Shahjahanpur with Especial reference to SS College, Shahjahanpur

Ground water is a crucial and important thing of our life guide system. The ground water assets are being applied for ingesting, irrigation and business purposes. There's developing challenge on deterioration of ground water fine because of geogenic and anthropogenic sports. The satisfactory of ground water has passed through an exchange to a quantity that the use of such water will be hazardous. Growth in universal salinity of the ground water and/or presence of excessive concentrations of fluoride, nitrate, iron, arsenic, total hardness and few toxic metallic ions have been observed in huge areas in several states of India. Ground water includes wide kinds of dissolved inorganic chemical constituents in numerous concentrations due to chemical and biochemical interactions among water and the geological materials thru which it flows and to a lesser quantity due to contribution from the environment and surface water bodies.

Today, it's miles a known fact that the groundwater nice is degrading day by day that's a severe difficulty these days, as water with negative first-class pose threats to human health and hygiene. Correct exceptional of water is of utmost importance for survival of man and animals, and as we recognise due to the fact the groundwater aquifers are the most important source of clean water, their infection will prove to be havoc. Within the mild of aforesaid statistics, it turns into important to assess the contemporary groundwater first-rate of shahjhanpur metropolis, in terms of pH cost, total dissolved solids, chlorine, calcium, magnesium, fluorine and nitrate stages, via taking samples from bore wells. In phrases of pH cost, TDS, Cl, Ca, and Mg, the values were within the proper limits as prescribed by means of W. H. O, at the same time as the tiers of f and no3 have been detected to be exceeding their permissible limits. For this reason, they have a look at well-known shows the want for proper and well-timed assessment of groundwater satisfactory and simultaneously highlights the urgency of the essential steps to be taken for the preservation and up gradation of water excellent to manipulate the prevailing water assets.

Hence the present assessment of groundwater quality helps in determining the physical and chemical characteristics of groundwater in parts of SS College, Shahjahanpur district.

pH: pH is used to determine the acidity or alkalinity of water and the concentration of hydrogen ions in the water. The pH value of all groundwater samples is found to be in the range of 6.56 to 8.14. The highest value of 8.14 is observed whereas the lowest value of 6.56 is observed at. In terms of pH value, the groundwater samples are well within the acceptable limit of WHO. There is no anomalous change in the groundwater samples. Long term exposure to pH beyond the permissible limit affects the mucous membrane of cells.

TDS: The total dissolved solids are composed mainly of Calcium, Potassium, Sodium, Manganese, Magnesium, Carbonate and Bicarbonate and other particulate matter. In present assessment the

groundwater samples show variation between 338 and 681 mg/l, in terms of TDS. For domestic uses, the maximum permissible limit of total dissolve solids is 1500 mg/l (prescribed by WHO). The maximum value of 681 mg/l is recorded and minimum value of 338 mg/l is recorded. Hence all the groundwater samples are not saline. In the present assessment, the total dissolved solids are found to be in the permissible limit of 1500mg/l.

Chloride (Cl): The chloride values for samples were found to be within the range of 54 – 156 mg/l. The maximum value of 156 mg/l is recorded and the minimum value of 54 mg/l. All of the groundwater samples show chloride values within the acceptable limit (250 mg/l) of WHO

Calcium (Ca): In this study, the Calcium values are recorded between 46 and 120 mg/l. the maximum value of 120 mg/l is recorded while the minimum value of 46 mg/l is recorded. For all the samples the values of calcium were found within the maximum permissible limit (200mg/l).

Magnesium (Mg): The Magnesium values are recorded between 14 and 78 mg/l. The highest value of 78 mg/l is observed and the lowest value of 14 mg/l is observed. All samples recorded the magnesium values within the permissible limit of 150 mg/l (prescribed by W.H.O).

Fluoride (F): The Fluoride values for the samples taken is recorded between 0.68 and 2.87 mg/l. The maximum permissible limit of fluoride according to WHO is 1.0 value of fluoride at most of stations is higher than the permissible value (1 mg/l) of W.H.O. Long term exposures to the drinking water with high value of fluoride can cause skeletal fluorosis.

Nitrate (NO₃): The value of Nitrate in all the ground water samples is found between 7.8 and 49.6 mg/l. The highest value of 49.6 mg/l is recorded and the lowest value of 7.8 mg/l is recorded. The Nitrate value of 49.6 mg/l at is slightly higher than the acceptable limit (45mg/l) of W.H.O.

Flora of SS College:

The rural areas of the Shahjahanpur district occupies the Rohilkhand division's southeast corner between the parallels of 27 ° 35 ' & 28 ° 29' North latitude and 79 ° 37' & 80 ° 23' East longitude. There is an average area height of 182 m asl. Around 60% of the rural population is included in the district. Farming is the principal occupation in this district. Hence a large range of deciduous and evergreen forests, characteristic of the upper gangetic plains, are well known in the region. As seen elsewhere in the subtropical regions of Northern India, the ephemeral and annual vegetation displays the typical development of the peak, rainy and winter seasons.

Swami Shukdevanand College is situated on the banks of the river Garra so a great floral variety is visible here. A brief survey of the floral variety is prepared here in by the Department of botany of the college and provided to the Biodiversity club of the College.

FLORA of SS COLLEGE SHAHJAHANPUR			
SN	Botanical Name	Family	Vernacular Name
1	<i>Ficus religiosa</i>	Moraceae	Peepal tree
2	<i>Polualthialongifolia</i>	Annonaceae	False Ashoka
3	<i>Cycas revoluta</i>	Cycadaceae	Sago palm
4	<i>Roystonea regia</i>	Arecaceae	Royal Bottle palm
5	<i>Yucca glauca</i>	Asparagaceae	Spanish dagger
6	<i>Araucaria araucana</i>	Araucariaceae	Monkey puzzle tree
7	<i>Schefflera arboricola</i>	Araliaceae	Dwarf umbrella tree
8	<i>Tabernaemontana divaricata</i>	Apocynaceae	Pinwheel flower
9	<i>Yucca gigantea</i>	Asparagaceae	Spineless flower
10	<i>Epipremnum aureum</i>	Araceae	Silver vine
11	<i>Ficus benjamina</i>	Moraceae	Weeping fig
12	<i>Dracaena reflexa</i>	Asparagaceae	Song of India
13	<i>Plumeria alba</i>	Apocynaceae	White Frangipani
14	<i>Washingtonia robusta</i>	Arecaceae	Mexican fan palm
15	<i>Tectona grandis</i>	Verbenaceae	Teak tree
16	<i>Artocarpus heterophyllus</i>	Moraceae	Jack fruit
17	<i>Ipomoea batatas</i>	Convolvulaceae	Sweet potato
18	<i>Thymus vulgaris</i>	Lamiaceae	Garden thyme
19	<i>Schinus molle</i>	Anacardiaceae	False pepper tree
20	<i>Psidium guajava</i>	Myrtaceae	Guava
21	<i>Plumeria rubra</i>	Apocynaceae	Red jasmine
22	<i>Euphorbia milii</i>	Euphorbiaceae	Crown of thorns
23	<i>Ocimum tenuiflorum</i>	Lamiaceae	Tulsi
24	<i>Mangifera indica</i>	Anacardiaceae	Mango
25	<i>Robinia pseudoacacia</i>	Fabaceae	Black locust
26	<i>Cassia fistula</i>	Fabaceae	Golden Shower
27	<i>Delonix regia</i>	Fabaceae	Flame tree
28	<i>Callistemon citrinus</i>	Myrtaceae	Bottle brush

29	<i>Cascabelathevetia</i>	Apocynaceae	kaner
30	<i>Bougainvillea spectabilis</i>	Nyctaginaceae	Paper flower
31	<i>Ficus elastic</i>	Moraceae	Rubber plant
32	<i>Bixaorellana</i>	Bixaceae	Sindur plant
33	<i>Phonixdactylifera</i>	Arecaceae	Date palm
34	<i>Eucalyptus globlues</i>	Myrtaceae	Tasmanian blue gum
35	<i>Coffeagrabica</i>	Rubiaceae	Arabian coffee
36	<i>Impatiens balsamina</i>	Balsaminaceae	Balsam
37	<i>Cordalinefurticosa</i>	Asparagaceae	cabbage palm
38	<i>Tecomastans</i>	Bignoniaceae	yellow trumpet bush
39	<i>Ligustrumlucidum</i>	Oleaceae	European privet
40	<i>Dracaena draco</i>	Asparagaceae	Dragon tree
41	<i>Azadirachtaindica</i>	Meliaceae	Neem tree
42	<i>Caesalpiniagilliesii</i>	Fabaceae	Red bird of Paradise
43	<i>Monsteradeliciosa</i>	Araceae	Swiss Cheese plant

Fauna of SSCollege



Common name- Jewel bug or metallic bug

Scientific name- *Chrysocoris stollii*

Phylum- Arthropoda

Class- Insecta

Order- Hemiptera



Common name- Red cotton bug

Scientific name- *Dysdercus cingulatus*

Phylum- Arthropoda

Class- Insecta

Order- Hemiptera



Common name- Yellow grass butterfly

Scientific name- *Eurema hecaba*

Phylum- Arthropoda

Class- Insecta

Order- Lepidoptera



Common name- Plain tiger butterfly

Scientific name- *Danaus chrysippus*

Phylum- Arthropoda

Class- Insecta

Order- Lepidoptera



Common name- Lemon butterfly

Scientific name- *Papilio demoleus*

Phylum- Arthropoda

Class- Insecta

Order- Lepidoptera



Common name- Blue beetle

Scientific name- *Chrysochus cobaltinus*

Phylum- Arthropoda

Class- Insecta

Order- Coleoptera



Common name- Dragonfly

Scientific name- *Sympetrum flaveolum*

Phylum- Arthropoda

Class- Insecta

Order- Odonata



Common name- Yellow paper wasp

Scientific name- *Ropalidia marginata*

Phylum- Arthropoda

Class- Insecta

Order- Hymenoptera



Common name- Honey bee

Scientific name- *Apis cerana indica*

Phylum- Arthropoda

Class- Insecta

Order- Hymenoptera



Common name- Long Flange Millipede

Scientific name- *Asiomorpha coarctata*

Phylum- Arthropoda

Class- Diplopoda

Order- Polydesmida



Common name- Garden slug

Scientific name- *Limax sp.*

Phylum- Mollusca

Class- Gastropoda



Common name- Sun Bird

Scientific name- *Cinnyris asiaticus*

Phylum- Chordata

Class- Aves

Order- Passeriformes



Common name- Bulbul

Scientific name- *Pyconotus jocosus*

Phylum- Chordata

Class- Aves

Order- Passeriformes

Energy Usage (to be updated)

Electricity charges – Rs 84,400 / month

Cost of Gas cylinders – Rs 2760 / month

Cost of generator fuel – Rs 8600 /month

Checklist of electrical, electronic equipment in College(to be updated)

No.	Devices	No.	kWh
1.	Number of CFL bulbs	624	12.48
2.	Number of Incandescent bulbs	16	0.96
3.	Number of LED bulbs	244	4.88
4.	Tube lights	169	10.4
5.	Fans	687	41.22
6.	ACs	40	40
7.	Computers	137	41.1
8.	Refrigerators	8	6.4
9.	Water pump	3	1.48
10.	Photocopier	5	3.75
11.	Printers	27	3.26
12.	LCD projector	7	2.45
13.	Television	5	0.69
14.	Number of inverters	15	
15.	Number of water heaters	1	0.4
16.	Scanner	4	0.48
17.	Interactive Digital Board	1	

Electric Appliance Audit Sheet					
Appliance	Power use (Watt)	Usage per day (Hours)	Number of appliances	Average kwh per day (watt x hours x no/ 1000)	Average kwh per month
light bulb Incandescent	60	1	16	0.96	20.16
Light bulb CFL	18	8	624	89.856	1886.976
LED bulb	20	10	244	48.8	1024.8
Motor	1000	2	3	6	126
Photocopier	750	2	5	7.5	157.5
Fan	60	9	687	370.98	7790.58
AC	1000	2	40	80	1680
Computers	300	6	137	246.6	5178.6
Tubes Lights	60	9	169	91.26	1916.46
Printers	120	1	27	3.24	68.04
Water filter	100	3	8	2.4	50.4
LCD Projector	350	1.5	07	3.675	77.175
Total					19976.691

The total energy utilization of the College for different purposes is approximately 19976.691 kwh/month. A hybrid source of energy comprising solar type of non-conventional category of energy will be a good energy management system for the College.

Electricity charges per month is Rs. Rs 84,400/-month. Energy saving through the replacement of incandescent bulbs to LED light may be a good energy management system for the College. Awareness Program for the stakeholders to save energy may also increase sustainability in the utilization of various energy source. Although Staff are encouraged to switch off their own lights, monitors and other equipment, the college administrative staff should carry out a lock down of the building at the end of every day and switch off any lights or equipment that have been left on. All the incandescent bulbs have to be replaced by low energy bulbs. Lighting in some areas such as the toilets are controlled by PIR (passive infrared light) sensors. Lighting in the library should be predominately LEDs and energy saving bulbs. The College should improve its monitoring and reporting of energy usage and provide information to campus users.

Another important source of alternative energy source college has to consider is solar power. No greenhouse gas emissions are released into the atmosphere when you use solar panels to create

electricity. And because the sun provides more energy than we'll ever need, electricity from solar power is a very important energy source in the move to clean energy production.

Existing energy management methods in the campus

- The College uses LED tubes and lights under the guidance of Dr. Shaleen kumar Singh, Dept. of English with the support of students.
- Energy saving campaigns are organized by science popularisation program by Dr. Shaleen kumar Singh, Dept. of English.
- Older and damaged equipment's are replaced if necessary.
- Wiring and electrical maintaence are periodically monitored and replacements are made.

4.2 Water Usage

Water cooler with drinking water filtration facility installed	Five water filter
Number of toilets	52
Number of toilet flush's	52
Health faucet's	2
Number of urinals for boys	30
Number of waterless urinals	Nil
Number of water taps	125
Number of wash basins	35
Number of leaking taps and quantity	15 taps, 547.4 litres/day
Quantity of water pumped	15,500 -16,500 litres/ day
Total water quantity used	14,808.2 Litres
Water charges paid	Rs.7000- Rs.9000

Activity	Water used per activity (litres)	Number of times activity done each day	Average water used by a person each day (litres)	Number of people in the College using water	Total household water consumption per day
Hands & face wash	0.5 – 1 litres	2 times a day	$1.5/2 \times 2 = 1.5$ litres	5000	$1.5 \times 5000 = 7500$ litres /day
Toilet flush (Staff)	2 – 4 litres	2 times a day	$6/2 \times 2 = 6$ litres	110	$6 \times 110 = 660$ litres/day
Toilet (students)	0.4 – 0.8 litre	2 times a day	$12/2 \times 2 = 1.2$ litres	4000	$1.2 \times 4000 = 4800$ litres/day
Drinking (cup)	0.2 – 0.4 litre	2 times a day	$0.6/2 \times 2 = 0.6$	2200	$0.6 \times 2200 = 1320$ litres/day
Biodiversity garden (m ² /once 1750-2500 Litres in a week during summer)	250 - 350 litres /day	Once a day	$250/2 \times 1 = 125$	-	125 litres/day
Leaking/dripping tap (per minute)	0.280 ml./minute	-	-	-	403.2 litres/ day
Total					14,808.2 Litres

Water audit at SS College, Shahjahanpur

The water audit was done during the second week of March where the usage of water is at the peak. The College uses 14808.2 liters of water every day. The main source of water is groundwater. Water from the public water supply is also utilized. 403.2 Litres of water is lost through the leaking of pipes.

Existing water management methods installed in the campus (to be updated).

- Water conservation and green awareness campaigns has been conducted on behalf of Biodiversity Club.
- Rain water collection pits are digged inorder to recharge ground water.
- More greenery has been added consistently inorder to improve ground water resource.

4.3 Waste measure and its disposal (to be updated)

- Total Stakeholders – 1250
- Class rooms –54
- Other rooms –
- Number of toilets - 52
- E-wastes- computers, electrical and electronic parts – Disposal by selling
- Plastic waste- Burning, dumping pit
- Solid wastes – Damaged furniture, paper waste, paper plates, food wastes
- Chemical wastes – Laboratory waste
- Waste water – Washing, urinals, bathrooms
- Glass waste – Broken glass wares from the labs
- Waste treatments – Biogas plant and compost system
- Napkin incinerator - 1

Quantity of waste generated (to be updated)

- Bio degradable – 1 kg/day (office)
- Non bio degradable – 0.5 kg/day (office)
- Bio degradable – 1 kg/day (labs)
- Non-bio-degradable – 0.250 kg/day (labs)
- Hazardous waste – 0.1 kg/day

Waste

Biodegradable waste = 2 kg/day

(to be updated)Non-biodegradable

waste= 0.85 kg/day(to be updated)

A composting pit is highly essential for the treatment of bio degradable waste generated from the food leftover by students and staff, office, vegetable garden and from the college campus cleaning process. Different methods such as pit composting, vermi-composting, bacterial composting using bacterial consortium, may be used to treat the bio degradable waste. Hazardous waste such as chemical waste from laboratories, E-waste, plastic, glass, tin waste etc. generated from the College can be collected properly and may be handed over to the pion .E-waste, plastic and glass bottles, other plastic wastes, cans, broken glass wares, tins etc., may be sold out.

The College has Different coloured bins maybe placed inorder to collect and segregate various types of waste. Training and campaigns in cotton bag making for students and Staff will reduce use of throw away plastic carry bags. Periodical training in health & hygiene, waste management and disposal, green healthy practices may inculcate a positive attitude for an clean and healthy living.

There should be proper sign boards displayed to tell students where to go for the disposal of other recyclables, plastics and hazardous wastes. There should be in place a policy for the handling and disposal of hazardous materials. The College should have in place plans for dealing with hazardous wastes in academic departments (art, chemistry, etc.) as well as the maintenance activities (paints, etc.). The College should ensure that the hazardous materials are disposed of properly. Chemistry department may change their experiments to green chemistry. Green chemistry is the utilisation of a set of principles that reduces or eliminates the use or generation of hazardous substances in the design, manufacture and application of chemical products.

SS College, Shahjahanpur is committed to managing chemical wastes produced in its practical and research laboratories in a safe and environmentally sound manner that complies with all applicable central and state government regulations.

At present in different laboratories of all science streams, following categories of chemicals are in use: Oxidizers, Oxidizing acids, Flammable liquids, Basic flammable liquids, Inorganic bases, Organic bases, Acidic Flammable Liquids, Organic Acids, Inorganic acids, Poisons (Toxic chemicals), Sulphides, Water-reactive, Water-Reactive acids and Non-Hazardous or non- regulated chemicals.

At present, the College does not have a proper waste management system and wastes happen reach the environment (air and water). Since the College has a strong commitment to protect the environment and to be abide by the regulations of the government, in next five years we plan to introduce "Chemical's Waste Management Guidelines".

The College will develop and implement proper management practices in the handling, storage, and disposal of chemical wastes that are generated in its laboratories. The handling and storage will be the areas where College will take adequate steps in the campus itself while disposal will be done in cooperation with a suitable outside agency.

The handling and storage will be strictly according to the "Chemicals Waste Management Guidelines".

As part of the guidelines, hazardous waste determination will be carried out for the waste from all laboratories and it will be stored in separate appropriate containers. As part of the hazardous waste management, the laboratories will take essential steps to minimise the quantity of waste, set up a satellite accumulation area, properly label all waste containers, close the waste containers to minimise exposure to atmosphere, and contact the collaborating waste disposal agency for a pick up.

The College will be strict on the source reduction of chemical waste. Laboratories will be asked to maintain the purchase of smallest quantities of chemicals for particular purposes, and share surplus chemicals with other laboratories. A shift from mercury based instruments (eg. mercury thermometer) to digital substitutes (eg. digital thermometer) will be made gradually. Laboratories will be asked to perform minimum scale experiments and keep software assisted chemical storage data to avoid duplicate purchases.

Hazardous waste Satellite accumulation areas will be maintained under strict and proper guidelines. The guidelines will address the requirements of the satellite storage area, properties of storage containers, storage limit and storage period before pick up. Proper labelling of the storage containers will be done which will ease the disposal process.

Individual safety of the students and Staff working in the laboratories will be ensured along with the waste management guidelines. The College will provide the safety wears to all in the laboratory and wearing them will be made mandatory. Safety alarms will be installed in all laboratories and students will be given training to use fire extinguishers in emergency situations of fire and explosion. Fire extinguishing cylinders will be installed in all laboratory areas. In addition, eye bath facility and open area showers will be introduced in front of all chemical laboratories. First aid boxes will be installed in all departments to help students who can possibly be injured while performing an experiment.

Existing waste management methods practiced

- Cleaning the campus on a daily basis.
- Segregation of waste into degradable and non-degradable by the cleaning staff.
- Waste bin's in placed in corridors, offices, and staff rooms.
- Incinerators to burn sanitary napkins.
- E-waste and plastic waste disposal at municipal collection centre.
- Campaigns for reducing, reuse, and recycle by Biodiversity club.

4.4 Greenery in Campus

Campus tree cover – (to be taken from Dr. Adarsh Pandey)

Total list of campus plant species identified – (to be taken from Dr. Adarsh Pandey)

List of Plants seen in College Campus during Biodiversity Audit (to be taken from Dr. Adarsh Pandey)

No.	Name of the Plant	Common names	Family
1	Anrographis paniculata	Kiriyathu	Acanthaceae
2	Asystasia dalzieliana		”
3	Asystasia gangetica	Upputhali	”
4	Hemigraphis alternata	Murikoodi	”
5	Justicia adathoda	Adalodakam	”
6	Justicia procumbens		”
7	Thunbergia grandiflora	Bengal trumpet	”
8	Zephyranthes minuta		Amaryllidaceae
9	Achyranthes apera	Kadalady	Amaranthaceae
10	Aerva lanata	Cherula	”
11	Cyathula prostrata		”
12	Gomphrena globosa	Vadamalli	”
13	Anacardium occidentale	Parangimavu	Anacardiaceae
14	Mangifera indica	Mavu	”
15	Annona muricata	Mullathi	Annonaceae
16	Cananga odorata	Langilangi	”
17	Polyalthia longifolia	Aranamaram	”
18	Centella asiatica	Kudangal	Apiaceae
19	Allamanda cathartica	Manjakolambi	Apocynaceae
20	Catheranthus roseus	Ushamalari	”
21	Nerium oleander	Arali	”
22	Plumeria rubra		”
23	Tabernaemontana divaricata	Nandiyar vattom	”
24	Anthurium andreanum		Araceae
25	Caladium bicolor	Varnachembu	”
26	Colocasia esculenta	Kattuchembu	”
27	Dieffendachia seguine		”

28	<i>Epipremnum pinnatum</i>	Money plant	”
29	<i>Cocos nucifera</i>	Thengu	Arecaceae
30	<i>Dypsis lutescens</i>	Yellow palm	”
31	<i>Calotropis gigantea</i>	Erikku	Asclepidaceae
32	<i>Ageratum conyzoides</i>	Kattapa	Asteraceae
33	<i>Chromolaena odorata</i>	Communist pacha	”
34	<i>Elephantopus scaber</i>	Anachuvadi	”
35	<i>Emilia sonchifolia</i>	Muyal cheviyan	”
36	<i>Tithonia diversifolia</i>	Veli suryakanthi	”
37	<i>Tridax procumbens</i>	Kumminippacha	”
38	<i>Vernonia cineria</i>	Poovamkurunal	”
39	<i>Wedelia trilobata</i>	Singapore daisy	”
40	<i>Millingtonia hortensis</i>	Akasaveppu	Bignoniaceae
41	<i>Casuarina equisetifolia</i>	Kattadi	Casuarinaceae
42	<i>Quisqualis indica</i>	Kulamari	Combretaceae
43	<i>Cuscuta reflexa</i>	Moodillathali	Convolvulaceae
44	<i>Evolvulus nummularis</i>	-----	”
45	<i>Euphorbia heterophylla</i>		Euphorbiaceae
46	<i>Euphorbia hirta</i>		”
47	<i>Euphorbia milii</i>		”
48	<i>Euphorbia tirucalli</i>	Thirukalli	”
49	<i>Phyllanthus amarus</i>	Keezharnelli	”
50	<i>Phyllanthus embelica</i>	Nelli	”
51	<i>Phyllanthus myrtifolius</i>		”
52	<i>Phyllanthus urinaria</i>	Chuvannakeezarnelli	”
53	<i>Caesalpinia pulcherrima</i>	Rajamalli	Fabaceae (Sub;Caesalpinioideae)
54	<i>Cassia fistula</i>	Kanikonna	”
55	<i>Saraca asoca</i>	Asoka chethy	”
56	<i>Senna occidentalis</i>	Karinthakara	”
57	<i>Mimosa pudica</i>	Thottavadi	Fabaceae (Sub:Mimosoideae)
58	<i>Arachis pintoii</i>		Fabaceae (Sub:Papilionoideae)
59	<i>Centrosema molle</i>	Kattupayar	”
60	<i>Clitoria ternatea</i>	Sankupushpam	”
61	<i>Desmodium gangeticum</i>	orilla	”

62	<i>Hyptis suaveolens</i>	Nattapoochedi	Lamiaceae
63	<i>Leucas aspera</i>	Thumba	”
64	<i>Ocimum tenuifolium</i>	Thulasi	Lamiaceae
65	<i>Asparagus racemosus</i>	Sathavari	Liliaceae
66	<i>Cuphea hyssopifolia</i>	----	Lytheraceae
67	<i>Hibiscus rosa-sinensis</i>	Chembarathy	Malvaceae
68	<i>Sida acuta</i>	----	”
69	<i>Melastoma malabathricum</i>	----	Melastomaceae
70	<i>Cyclea peltata</i>	Padathali	Menispermaceae
71	<i>Tinospora cordifolia</i>	Chittamruhtu	”
72	<i>Swietenia mahagoni</i>	Mahagony	Meliaceae
73	<i>Boerhavia diffusa</i>	Thazhuthama	Nyctaginaceae
74	<i>Biophytum reinwardtii</i>	Mukkuty	Oxalidaceae
75	<i>Sesamum orientale</i>	Ellu	Pedaliaceae
76	<i>Hemidesmus indicus</i>	Naruneendi	Periplocaceae
77	<i>Piper nigrum</i>	Kurumulagu	Piperaceae
78	<i>Alloteropsis cimicina</i>	---	Poaceae
79	<i>Brachiaria ramosa</i>	----	”
80	<i>Chrysopogon aciculatus</i>	---	”
81	<i>Cynadon dactylon</i>	Karuga pullu	”
82	<i>Dactyloctenium aegyptium</i>	----	”
83	<i>Digitaria ciliaris</i>	----	”
84	<i>Heteropogon contortus</i>	Soolampullu	”
85	<i>Pennisetum polystachyon</i>	----	”
86	<i>Chaselia curviflora</i>	----	Rubiaceae
87	<i>Hamelia patens</i>	----	”
88	<i>Ixora javanica</i>	----	”
89	<i>Oldenlandia auriculata</i>	-----	”
90	<i>Oldenlandia corymbosa</i>	----	”
91	<i>Murraya paniculata</i>	Maramulla	Rutaceae
92	<i>Chrysophyllum cainito</i>	-----	Sapotaceae
93	<i>Manilkara zapota</i>	Sapota	”
94	<i>Mimusops elengi</i>	Elangi	”
95	<i>Scoparia dulcis</i>	Kallurukki	Scrophulariaceae
96	<i>Solanum torvum</i>	Chunda	Solanaceae
97	<i>Gauzuma ulmifolia</i>		Sterculiaceae

98	Helicteres isora	Edambiri valambiri	”
99	Trimfetta rhomboidea		Tiliaceae
100	Citharexylum spinosum	P arijatham	Verbenaceae
101	Clerodendron infortunatum	Perivalum	”
102	Clerodendron paniculatum	Arumasapoo	”
103	Duranda erecta		”
104	Lantana camara		”

List of seasonal vegetables cultivated (to be taken from Dr. Adarsh Pandey)

No.	Vegetable Plants
1.	Plantain
2.	Tapioca
3.	Birds eye chilli (Kanthari Mulugu)
4.	Curry leaves
5.	Moringa
6.	Brinjal
7.	Cooking Plantain
8.	Green Chilly
9.	Beans
10.	Colocasia
11.	Ginger
12.	Bitter Gaurd
13.	Papaya
14.	Asparagus
15.	Pineapple
16.	Lady’s finger
17.	Tomato
18.	Turmeric
19.	Asparagus green
20.	Beans naadan

**List of Ant Diversity in College Campus during Biodiversity Audit
(to be taken from Dr. Adarsh Pandey)**

Family: Formicidae			
Subfamily	Genus	Species	Common Name
Formicinae	Anoplolepis	<i>Anoplolepis gracilipes</i>	Yellow crazy ant
	Camponotus	<i>Camponotus compressus</i>	Godzilla ant
		<i>Camponotus irritans</i>	Carpenter ant
		<i>Camponotus parius</i>	Silver-Backed honey ant
	Oecophylla	<i>Oecophylla smaragdina</i>	Weaver ant
Paratrachina	<i>Paratrachina longicurinus</i>	Black crazy ant	
Myrmicinae	Carebara	<i>Pheidologeton affinis</i>	Not available
	Crematogaster	<i>Crematogaster sp</i>	Valentine ant Cocktail ant
	Meranoplus	<i>Meranoplus bicolour</i>	Silky shield
	Monomorium	<i>Monomorium pharaonis</i>	Pharaoh ant
	Pheidole	<i>Pheidole dentate</i>	Big headed ant
		<i>Pheidole megacephala</i>	Big headed ant
	Solenopsis	<i>Solenopsis geminata</i>	Fire ant, Ginger ant
Dolichoderinae	Tapinoma	<i>Tapinoma melanocephala</i>	Ghost ant
Ponerinae	Diacamma	<i>Diacamma assamense</i>	Greater striated Bispinous ant
		<i>Diacamma rugosum</i>	Queenless ponerine ant
		<i>Diacamma scalpratum</i>	Gaint ponerine ant
	Odontomachus	<i>Odontomachus haematodus</i>	Greater trapjaw ant

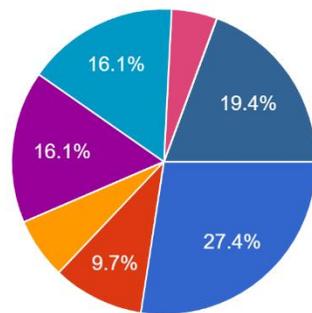
List of Butterfly Diversity in College Campus during Biodiversity Audit

Kingdom: *Animalia*, Phylum: *Arthropoda*, Class: *Insecta*, Sub order:
(*Butterflies*)

Family	Common Name	Scientific Name
Papilionidae (Swallowtails)	Southern Birdwing	Troides minos
	Blue Mormon	Papilio polymnestor
	Crimson Rose	Pachliopta hector
	Common Mormon	Papilio polytes romulus
	Tailed Jay	Graphium agamenon menides
	Lime Butterfly	Papilio demoleus
Peridae (Whites & Yellows)	Lemon Emigrant	Catapsilia pomona
	Mottled Emigrant	Catopsilia pyranthe
	Psyche	Leptosia nina
	Common Jezebel	Delias eucharis
	Grass Yellow	Eurema hecabe simulate
Nymphalidae (Brush-footed Butterflies)	Blue Tiger	Tirumala limniace
	Common Crow	Euploea core
	Plain Tiger	Danus chrysippus
	Striped Tiger	Danus genutia
	Tamil Yeoman	Cirrochroa thais
	Rustic	Cupha erymanthis
	Indian Fritillary	Argyreus hyperbius hybrida
	Danaid Eggfly	Hypolimnas misippus
Lycaenidae (Blues)	Bright Babul Blue	Azonus ubaldus
	Common Cerulean	Jamides celeno aelianus
	Indian Cupid	Everes lacturnus syntala
	Malayan	Megisba malaya
	Pale Glass Blue	Zizeeria maha ossa
	Red Pierrot	Talicauda nyseus
Hespiridae (Skippers)	Bush Hopper	Ampittia dioscorides
	Grass Demon	Udaspes folus
	Common Banded Awl	Hasora chromus

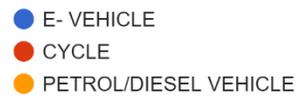
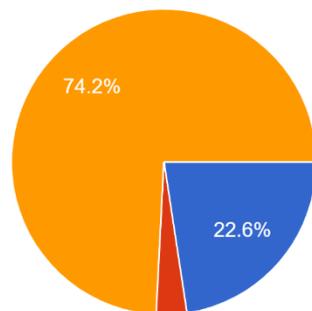
DEPARTMENT

62 responses



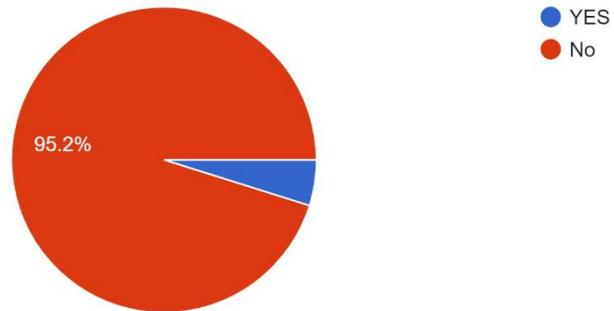
From witch vehicle do you come to the college ?

62 responses



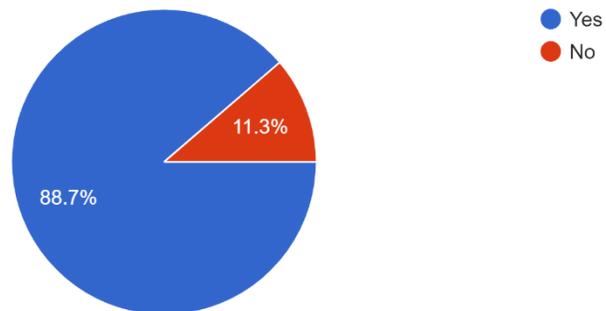
Do you use the plastic bags/cups in the institution ?

62 responses



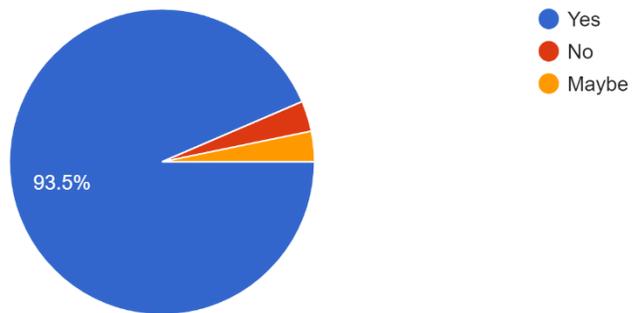
Do you know the environmental policy of the College?

62 responses



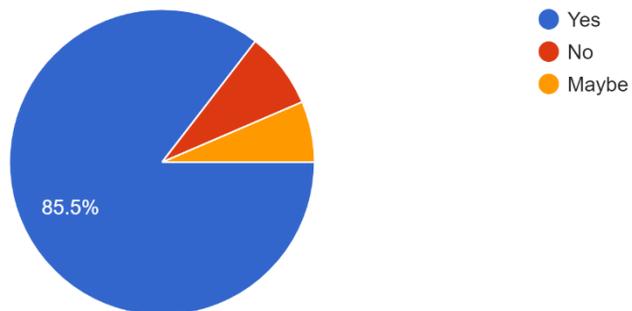
Do you participate the Programmes for creating awareness about environment cleanliness? .

62 responses



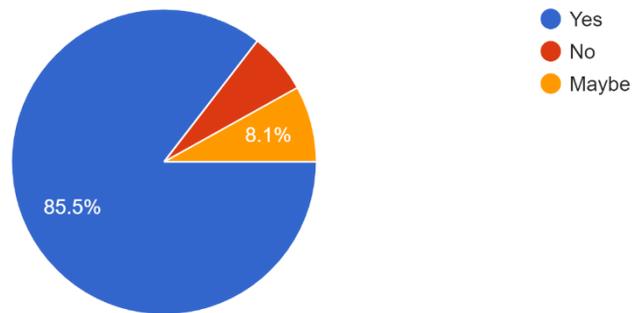
Do you Participate the non vehicle day , Swatchata day, world wild life week etc.

62 responses



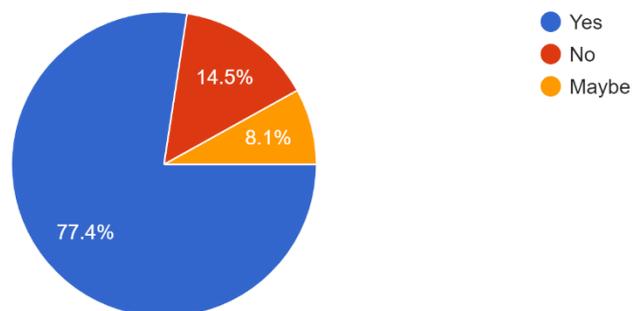
Do you take part in the initiatives to undertake measures for clean campus?

62 responses



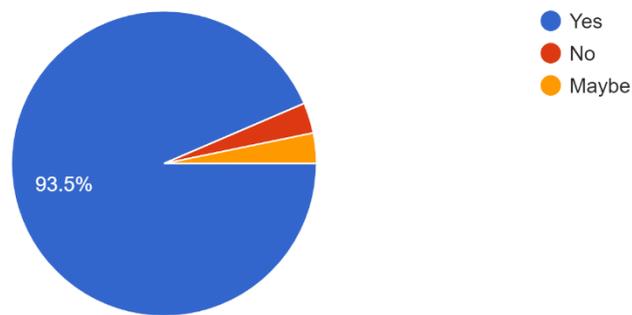
Do you know about the measures adopted for fire prevention?

62 responses



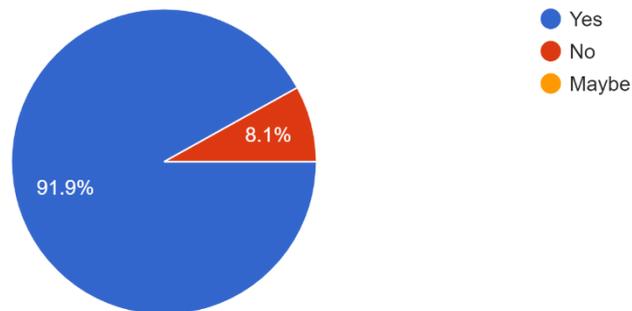
Do you know the What are the measures adopted by the institution to save the electricity and minimizing the use of papers?

62 responses



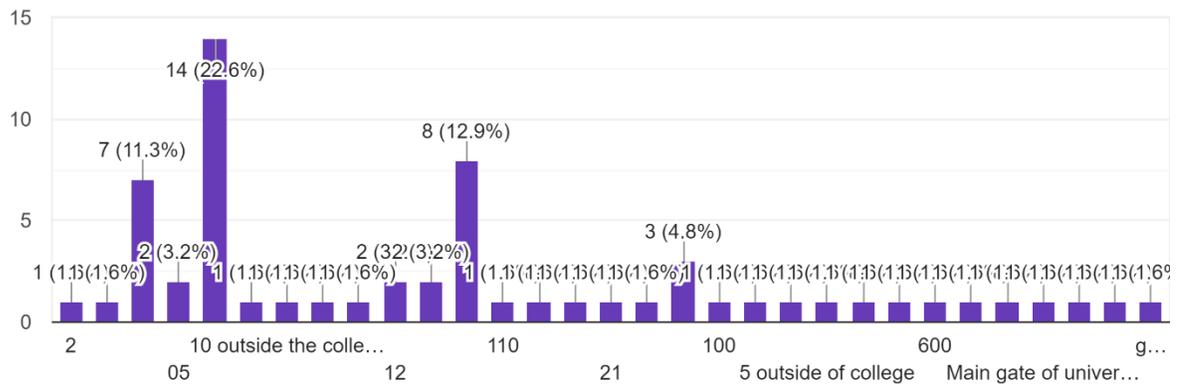
Do you follow the pollution control measures, (mainly related to air and sound).

62 responses



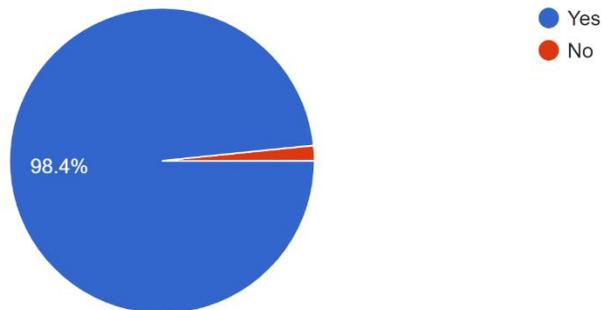
10. How many trees have you planted outside the college and inside college premises ? (Give numbers only)

62 responses



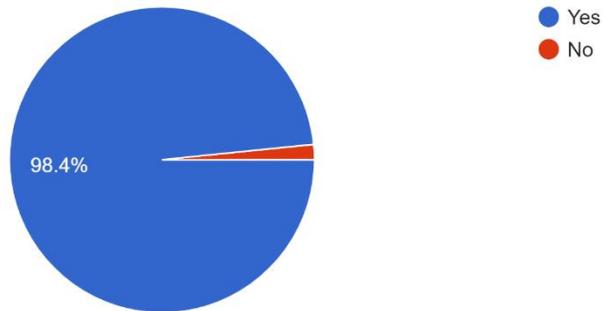
Do you use hand sanitizers ?

62 responses



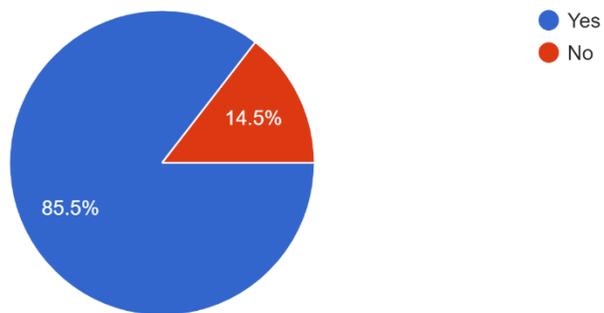
Do you use LPG cylinders at home?

62 responses



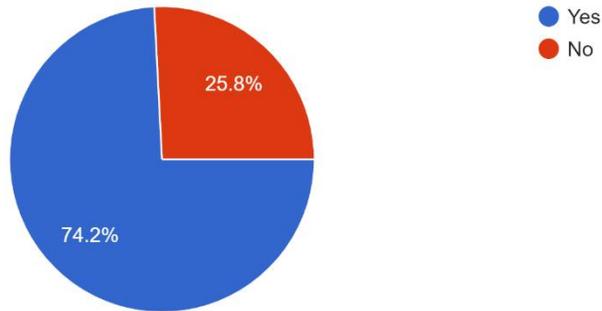
Are you aware about the Waste management system of the college?

62 responses



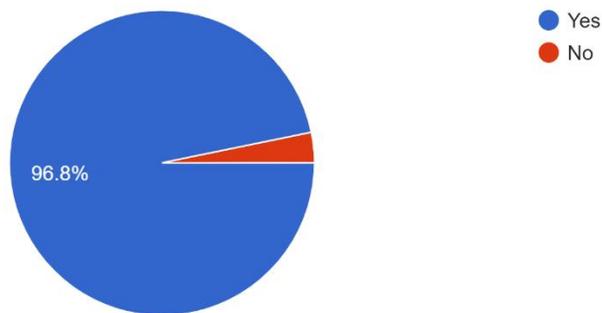
Do you use paper bags or cups in the college?

62 responses



Do you apply energy saving method in the college?

62 responses



Valuable Suggestions Received

Trees which needs more water should not be planted. Waste water of water purifiers should be used for trees and garden.

College staff should be inspired to use E-vehicle.

- 1) Awareness program should be run in the college to make the environment clean and beautiful.
- 2) Solar energy based plants should be promoted to make the college eco friendly.
- 3) To promote paperless based environment in the college, the admission process should be made online.

Hanging Flowers Plants Should Be Placed In Different Locations

College Also Can Starts It's Own Nursery With The Help of Students And By This Way Plants Distribution Campaigns Can Take Place.

There Is Also A Need of Awareness Sign Boards Inside The Premises...

The use of solar energy can be promoted.

I would like to suggest that monthly there should be an hour a day free of electricity use for a week & spend this 1 hour in the campus garden to be closed with the nature more...

To give 30 marks to a student of the first semester for planting 10 fruit trees and preserving them till the sixth semester.

Awareness program should be organized to motivate people to save the environment.

The middle ground of the college can be declared as a green area so that no student is prohibited from using plastic or non-bio degradable items here.

Awareness programs should be conducted among the students.

GREEN AUDIT Questionnaire

(Prepared by Prithvi, the Environment Organization)

1. Has the institution formed environment policy?
Yes, the policy aims at
2. Is there a process to Review Environmental objectives?
Yes
3. Do all employees know the environmental policy? If Yes give details .
4. Do all the students know the environmental policy? If Yes give details .
5. Is the information related to the environment aspects kept up to date? If Yes give details .
6. Has the institution any linkages with GO's and NGO's? If Yes give details .
If Yes give details .

7. Has the institution organized programmes for creating awareness about environment cleanliness? If Yes give details .
8. Has the institution organized any training to create awareness about environment conservation among students? If, Yes give details .
9. Has the institution observing environment conservation related days, weeks? If Yes give details .
10. Has the institution observed non vehicle day, swatchata day, world wild life week If Yes give details .
11. How the institution does initiates to undertake measures for clean campus?
12. How does the institution initiate to increase measures for clean society/village/city?
13. How does the institution initiate to increase participation of stakeholders to undertake measures for clean campus?
All the stake holders participate in programmes related to clean campus.
14. What are the measures adopted for fire prevention?
15. Has the institution organized any training for fire prevention?
16. Has the institution organized any training for laboratory assistance and attendants?
17. What is the emergency response procedure?
18. Has the institution formed a system of garbage waste management and system of waste management in the hostel?
19. Has the institution established solar system, non-conventional energy resources for various purposes?

20. What are the measures adopted by the institution to save the electricity and minimizing the use of papers?
21. Has the institution established vermiculture project?
22. Has the institution established a system of e- waste management
23. Has the eco-friendly disposal mechanism established for the changed lifestyle of the students?
24. Is the eco-friendly disposal mechanism established for the laboratory solid and liquid waste?
25. Is monitoring system established for transportation and travelling?
26. Response to public enquiries and complaints.

27. Has the institution adopted pollution control measures, (mainly related to air and sound).
28. Has the institution undertake health check-up camps for the students and staff.
29. What are the efforts taken to increase greenery in the campus?
30. Has the institution devised innovative ideas, mechanism to sensitize, create awareness, motivate and educate students and society about environment conservation.

Green Policy of Swami Shukdevanand College, Shahjahanpur

Purpose

This document narrates the Green Policy and procedures of Swami Shukdevanand College for conducting their operations and activities in an environmentally responsible and sustainable manner.

Background

In 2017, the IQAC of Swami Shukdevanand College, Shahjahanpur created the Environmental Policy of the Institute and officially declared a commitment to the protection of the environment and responsible use of natural resources. As the IQAC of the SS College leads the way in the pursuit of knowledge and torches the path of the institute so that the teachers, students and other employees may gain the knowledge about their to extend healthy life and reduce illness and disability. The institution will annually conduct a green audit to ensure the green practices and the public health and the environment. A biodiversity club is also be established consisting like-minded experts of the Institution so that college me add to pollution prevention and sustainable development while continually seeking to reduce resource consumption.

The environmental policy of SS College, Shahjahanpur puts forth the following important points of commitments:

- The college staff will have Compliance with all federal, State, and local environmental laws and regulations, as well as Executive Orders of State Govt of UP.

- The College will work for the Prevention of pollution by minimizing the generation of wastes where possible, reducing consumption, recycling materials, and disposing of wastes in an environmentally responsible manner.
- The college will have integration of environmental and health considerations into decision-making processes.
- The staff of the college also attempt to reduce pollution in, around and out of the campus.

The staff of the college will be responsible for being aware of the environmental and health impacts of their jobs and for continually striving to minimize these impacts as set forth in this policy.

Environment Policy of the SS College, Shahjahanpur

Swami Shukdevanand College, Shahjahanpur is committed to protecting public health by conducting our operations and activities in an environmentally responsible and sustainable manner. The employees of the institution are committed to complying with all applicable laws and regulations. We recognize that reducing and, where possible, eliminating the environmental impacts of our activities is an important part of our mission as stewards of public health. The college attempts to lead in entire Rohilkhand region by achieving environmental excellence. The College will work with its employees and other internal and external entities to establish and follow principles, in conjunction with the Environmental Policy of Nation.

SS College, Shahjahanpur has laid down following principles and practices to achieve resource conservation, waste reduction, and sustainability overall are summarized below:

Swami Shukdevanand College and its employees will regularly attempt:

- Comply with mandatory standards to carry out our procedures to maintain our services in compliance with relevant environmental legislation and regulations.
- Conserve electricity and other tools of natural origin
- Encourage the use of public transit by staff
- Reducing, reusing , and recycling to minimise waste
- Minimize hazardous waste production
- Embrace green procurement processes
- Ensure completion of environmental sensitivity instruction for all workers
- Continue to review and reduce the consequences of our operations

D. Responsibilities of Employee:

Energy Conservation

Employees of Swami Shukdevanand College, Shahjahanpur will attempt to:

1. Switch off lights when not in use, and, when possible, use natural light.
2. Switch off all computers, consoles, speakers and other office devices at the end of each business day, not just turn off.
3. At the end of-work day, turn off your power strip.
4. In order to enter a low-power or sleep mode while not in use, activate the power down settings on your computer and display.
5. Unplug energy-draining devices (e.g. mobile phone chargers, fans, coffee machines, laptop printers, radios) and when not in operation.
6. Whenever appropriate, use compact fluorescent light bulbs (CFLs) for desk lamps as opposed to incandescent ones.
7. Where feasible, use the staircase.
8. Where practicable, use video conferencing and phone calls as an alternative to flying.
9. Limit the use of heaters in vacuum.

Reduction of Materials Consumption

Employees of Swami Shukdevanand College, Shahjahanpur will attempt to:

1. Avoid using paper by remotely transmitting and saving papers.
2. Print and photocopy out what you like and, if possible, double-side your work.
3. Tell employers and superiors why you want papers that are double-sided.
4. For faxes, scrap paper, or draughts, use the reverse side of old papers. Reduce

Fuel Consumption and Air Pollution

Employees of Swami Shukdevanand College, Shahjahanpur will attempt to:

- a. Ride mass transit or other alternative forms of transportation, whenever possible.
- b. Use carpools or vanpools, when possible, over single use cars.
- c. Telework one day a week, if possible.

Waste Management and Recycling

Employees of Swami Shukdevanand College, Shahjahanpur will attempt to:

1. Using reusable water cups, pots, and utensils that are sturdy.
2. Reduce the volume of toner in the papers that, if possible, would be written.
3. Whenever possible, print papers in black and white or grayscale.
4. If found on the campus, recycle sheets, paper goods, cardboard, binders, files, catalogues, crates, bottles , cans, batteries, electronics, toner and ink cartridges.
5. Recycle plastic and paper items where the Montgomery County buildings other than the Bethesda campus are situated in compliance with county regulations. Plans will be developed by the Green Team to introduce such recycling.
6. Donate to the Land Use Division used furniture and electronics.

Minimize Toxics and Hazardous Waste:

1. Using reusable water cups, pots, and utensils that are sturdy.
2. Reduce the volume of toner in papers that, if possible, would be printed.
3. Whenever practicable, print the papers in black and white or grayscale.
4. If found on the Bethesda campus, recycle sheets, paper goods, cardboard, binders, files, catalogues, bins, bottles , cans, batteries, electronics, toner and ink cartridges.
5. If there are Montgomery County buildings other than the Bethesda campus, compost plastic and paper items in compliance with county regulations. Plans would-be created by the Green Team to introduce such recycling.
6. Donate through the Property Use Division used furniture and electronics.

Commitment to Green Purchasing:

Employees of Swami Shukdevanand College, Shahjahanpur will attempt to:

1. Use copier and printer paper containing at least 30 percent recycled post-consumer material.
2. Wherever possible, purchase office equipment and furniture containing the largest proportion of recycled and non-toxic items.
3. Buy items that contain bio-based materials wherever possible
4. Buy office appliances from Energy Star.
5. To classify computers and monitors with environmental characteristics and buy computers and monitors with at least a Bronze ranking, use the Electronic Product Environmental Evaluation Tool (EPEAT).
6. Buy quality furniture and electronics through the Property Utilization Section that are no longer required.

Increasing Awareness of Environment and Public Health

All employees of SS College Shahjahanpur are required to abide by all the rules and responsibilities yoked on them so that we be able to create an awareness of the Environment Pollution and inculcate green habits.

To be obtained

1. MoU with NGO Prithvi
2. Formation of Biodiversity Club or Nature Club
3. Electricity Load (Solar Details for year 2018)
4. Air Purity Details
5. Water Alkaline Report
6. Photographs of Green manure Pit
7. Photographs of Plants
8. Photographs of News Cutting
9. Green Audit training Pictures
10. Graphs needs to be updated

GREEN AUDIT Questionnaire

DEPARTMENT

From which vehicle do you come to the college ?

Do you use the plastic bags/cups in the Institution ?

Do you know the environmental policy of the College?

Do you participate in the Programmes for creating awareness about environment cleanliness? .

Do you Participate in the non vehicle day , Swachata day, world wild life week etc.

Do you take part in the initiatives to undertake measures for clean campus?

Do you know about the measures adopted for fire prevention?

Do you know the What are the measures adopted by the institution to save the electricity and minimizing the use of papers?

Do you follow the pollution control measures, (mainly related to air and sound).

10. How many trees have you planted outside the college and inside college premises ? (Give numbers only)

Do you use hand sanitizers ?

Do you use LPG cylinders at home?

Are you aware about the Waste management system of the college?

Do you use paper bags or cups in the college?

Do you apply energy saving method in the college?

Your suggestions are invited to the Green Audit Committee of the college so that the green zone can be increased in the college.

Plantation Area (Sq Meters)
Built Up Area (Sq Meters)
[VALUE] (75%)
[VALUE] (25%)
LAND USE ANALYSIS