



Maratha Vidya Prasarak Samaj

G. M. D. Arts, B. W. Commerce and Science College, Sinnar, Dist. Nashik

Affiliated to Savitribai Phule Pune University, Pune

Id.No.PU/NS/ASC/013/1969

Best College Awarded by SPPU2012-13

AISHE:C-41292

www.gmdcollege.in

ISO 9001:2015 Certified College

sinnarcollege001@yahoo.com

INTERNAL QUALITY ASSURANCE CELL

CRITERION VII: INSTITUTIONAL VALUES & BEST PRACTICES



7.1.2: 1. Alternate sources of energy and energy conservation measures



Maratha Vidya Prasarak Samaj's
**G.M.D. Arts, B.W. Commerce
& Science College, Sinnar**

Tal. Sinnar, Dist. Nashik - 422 103 (M.S.) INDIA

Best College Award by Savitribai
Phule Pune University 2012-13

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Affiliated to Savitribai Phule Pune

University ID No. : PU/NS/ASC/013/(1969)

Junior College No. J.13.13.001

HTE Sevaarth ID - 06220100119_AST AISHE - C - 41292

Ref. No. 537/2023-24

Date : 13/07/2023

DECLARATION

This is to declare that the information, reports, true copies of the supporting documents, numerical data, provided links, institutional data, photographs etc. submitted/presented herewith is verified by Internal Quality Assurance Cell (IQAC) of this college and is correct as per the records. This declaration is for the purpose of NAAC accreditation of HEI for the 4th Cycle during the period from 2017-2018 to 2021-2022.

Date: 13/07/2023

Place: Sinnar

Dr. C. E. Gurule
Coordinator, IQAC
Co-ordinator
IQAC

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Dr. P. V. Rasal
Chairman, IQAC and Principal

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Use of Solar Energy in the Campus

Sr. No.	Facilities	Capacity
1	Roof Top SOLAR Grid Connected to Solar Plant	15.3 kWh
2	Electricity Roof Top Solar Off Grid Solar System	7.5 kWh
3	Solar Water Heater System	2000 LPD

Alternate Sources of Energy and Energy Conservation Measures

1. Electricity Roof top SOLAR Grid connected solar plant (15.3 kWh)



SOLAR Grid Connected to Solar Plant (15.3 kWh)



Solar on Grid Invertor

2. Electricity Roof Top Solar Off Grid Solar System (7.5 kWh)



Top Solar Off Grid Solar System (7.5 kWh)

3. Solar Water Heater System (2000 LPD)



Solar Water Heater System (2000 LPD)

The following are the major consumers of the solar electricity in the facility:



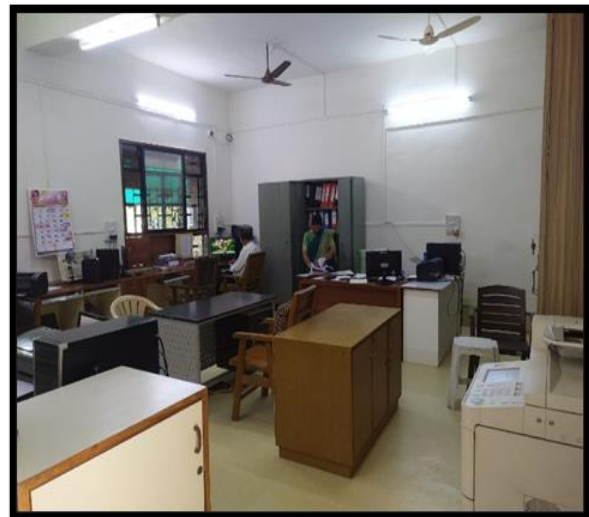
Examination Section



IQAC & NAAC Room



Principal Office



Administrative office



UPS



Library



Computer Lab



B.Voc.

Neel

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IQAC
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7.1.2 Waste Management Facility



7.1.2 Waste Management



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Vermi-compost Fertilizer Unit Report

The college has a Vermicompost Fertilizer Unit of 10 beds. The unit was established in 2009. The project was funded by UGC. The unit comprises total 10 beds. They are constructed with bricks and cement with the depth of 2.5 feet and the width of 2.00 feet. They are covered with a tin roof. For the continuous moisture, a water supply is provided with a PVC pipeline.

There are three layers in a bed. The first layer is made up of the coarse sand. The layer of the coarse sand is covered with the clay. The third layer is made up of the fine sand which covers the soil layer. The organic material is filled on as base of the sand and clay layer in the unit beds. The slurry of dung is spread on the upper surface of the organic waste material. The leaves, fruits and grass are collected from the entire campus. The organic waste material and cow dung are used as food material for the worms.

The earthworms (*Eisenia Foetida*) are introduced into the beds for the further process of decomposition and formation of vermicompost from the manure. The worms inhabit in the beds and continuously feed on the organic matter and produce excreta which is used as a rich compost fertilizer. Simultaneously, the worms also excrete liquid waste known as vermivash which is useful for the agricultural purpose as a pesticide.

After every two months, we collect the vermicompost manure from the beds with the careful handling of the worms. The collected fertilizer is packed in the degradable bags and distributed in campus as per the requirement of the departments. It is used for the college gardens such as *Rashi*, *Nakshatra*, *Vrundavana*, Mango garden and the Botanical Garden.

Department of Zoology takes care of the unit and maintains the record of the distribution of the fertilizer.

The benefits and the significance of the activity are as follows:

- Reduces waste and produces rich bio fertilizer and creates balance in the ecology
- Increases crop yield and declines the dependence of the chemical fertilizers

- Soil structures affected by principally through the formation of burrows which produces porous nature of soil
- Increases water infiltration and water holding capacity of soil and the aeration of soil
- Earthworm castes are enriched with the essential plant nutrients and enhances soil fertility.

Photographs



Organic Waste dumped in the Beds



Compost Fertilizer is Provided to the staff





Earthworm Species *Esiana Foetida*



Preparation of vermicomposting BED



Degradable waste is collected



Manure

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7.1.2 Water Management & Utilization Report



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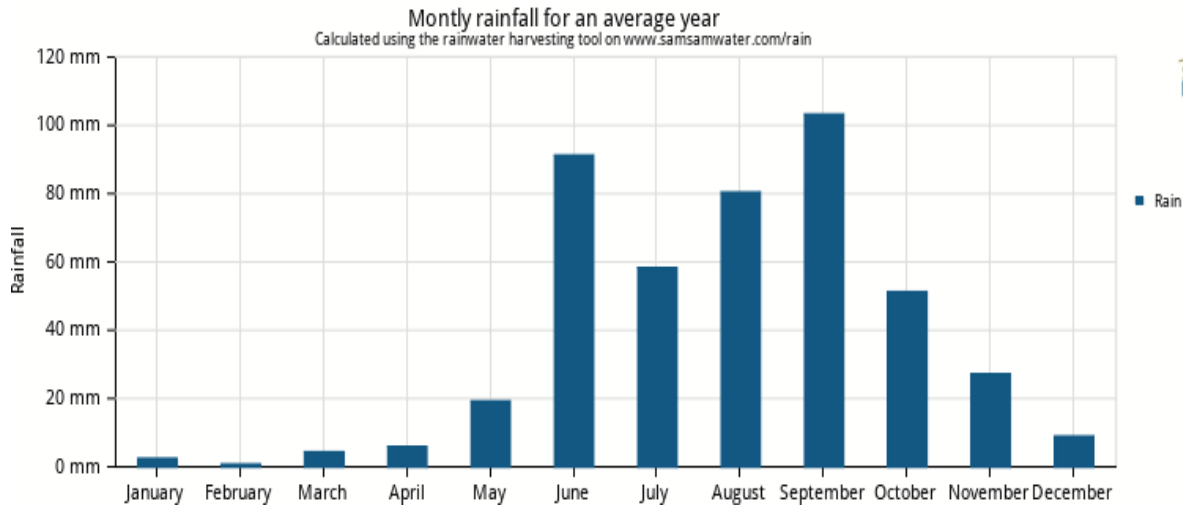


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Water Storage and Utilization Report

Rainfall:

The average rainfall at this location varies between 0.7 mm in the driest month (February) and 103.2 mm in the wettest month (September). The total annual average rainfall in an year is 453 mm.



Calculation of Water Requirement:

In the investigation, one well which is about 500 meter away from the college campus was identified as important source of water. The well bears water throughout the year and fulfills need of water for toilets, laboratories and gardening. Drinking water in the hostels and college premises were obtained through the water connection from Sinnar Municipal council. Well water is used in the canteen, bathrooms, laboratories, hostels, staff quarters and on the grounds. There were no leaks or overflows of water from above tanks throughout the survey, thus there was no water loss. A small artificial pond is also providing some water for trees planted in the

college campus. In monsoon water from main building and hostel building is released in the pond as a part of rain water harvesting. Pond is also becomes home for many Phytoplanktons, Zooplanktons, Fish and various Hydrophytes.

The following water sources was identified in the college campus:

1. Well 500 meters away from college campus.
2. Pond in the College campus.

Table 1 Source of water

Sr. No.	Source of water	Number of times the water is uplifted from the source	Average quantity of water uplifted. (Lit)
1	Well 500 meters away from college campus	2 times a day (total 5 hrs)	40000
2	Pond in the College campus	1 time a day (total 5 hrs)	30000
Total Water uplifted in the campus: 70,000			

Major Water Source in the College Campus



Well as a water resource



Pond in College campus

Table 2: Total Average requirement of water in campus

Sr. No.	Particulars	Total population	Required Water Supply (liter per person per day)	Water Requirement (liter per day)
1	College Staff (Teaching and Non-Teaching)	139	20	2,780
2	College Students (Girls and Boys)	3229	20	64,580
3	Residential Students	11	45	495
4	Residential Staff	20	45	900
5	Floating Population (Visitors)	25	20	500
Total		5498	-	69,255

The data gathered from all departments is double-checked and verified. The college uses 69,255 ltr./day on average, with 2,780 ltr./day for staff and 64,580 ltr./day for students. While the residential staff uses total 900 L water per day. Residential students use 495 ltr./day. That means the water demand for whole year is 2,52,78,075 liters.

Waste water Management:

Water usage can be described as the amount of water consumed on campus for all activities from various water sources. This applies to all residences, academic buildings, on-campus, and on-grounds usage. Water that is moved off campus is referred to as wastewater. Based on data on water usage and the fact that around 80% of the water supplied is converted to waste water via washrooms, chemical laboratories, and other means, the campus created approximately 56,000 liters of waste water every day.

There is a combined drainage system in place that carries all liquid effluent to a sewage system. It is necessary to collect grey and black water. After minimal treatment, grey water is used for plant irrigation, and black water is effectively treated with a simple septic system and soak pits.



Drainage system of Chemistry department



Sewer for wastewater from toilet at Main Building



Septic tank near toilet of main building

Rain Water Harvesting Potential:

There are four adjacent buildings possess large terrace areas and paved surface. All of the buildings had Rain Water Harvesting (RWH) System implementation. But as construction is in progress, RWH are not in working. But, after completion of construction work RWH will be reinstalled. The harvested water is released in the pond available in the college campus. The water harvested in the pond is utilized for the purpose of gardening in the college campus.



Rain Water Harvesting Installation unit (Work in progress)

Photos of Water Management and Distribution System



College Open Well



Water Storage Tank



Water Circulation from Pond



Storage Tank Near Canteen



Water Storage Tank



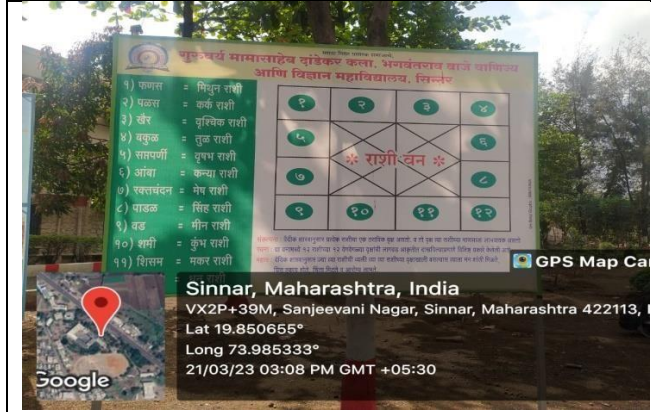
Water Filter Near Tea Club



Pipe Line



Nakshatra Vana



Rashi Vana



Saraswati Vana


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7.1.5 Disabled friendly barrier free environment



7.1.5 Disabled friendly barrier free environment



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POLICY DOCUMENT FOR BARRIER FREE AND DIVYANGJAN FRIENDLY ENVIRONMENT

Categories of the Disability:

As per the guidelines of the University Grants Commission and the Ministry of Social Justice and Empowerment and the Ministry of Human Resource Development, Government of India, the "Disability" is classified in following categories:

- Blindness
- Low vision
- Leprosy-cured
- Hearing impairment
- Loco motor disability
- Mental retardation
- Mental illness

Actions Initiated:

- The college has four ramps and two wheelchairs chairs to pass freely to the classrooms.
- The office shall maintain the complete database of differently-abled students, their addresses with phone numbers in order to facilitate the communication and other requirements.
- It will be continuously monitoring the facilities and assistance in the matters of differently-abled persons.
- The scribe facility is provided to the Divyangjan as per the University norms.
- The library provides some literature to the students.


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Geotagged Photos of Ramp and Wheel Chair Facilities



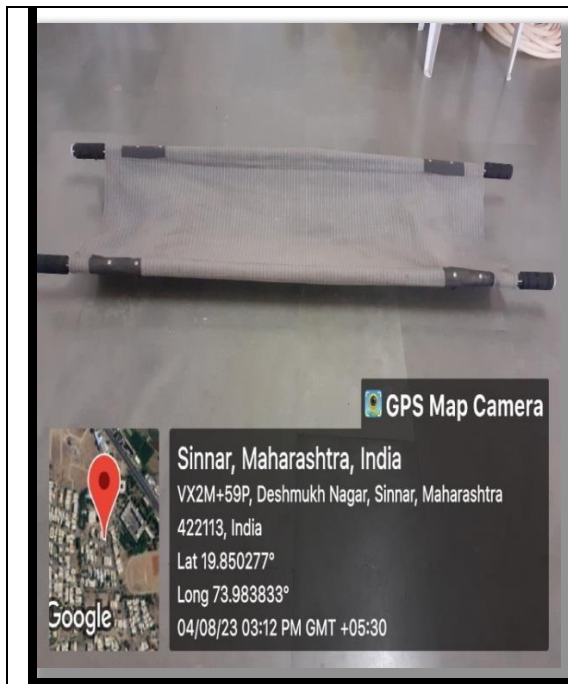
Ramp 1



Ramp 2



Scribe is provide for a blind student



Strecher



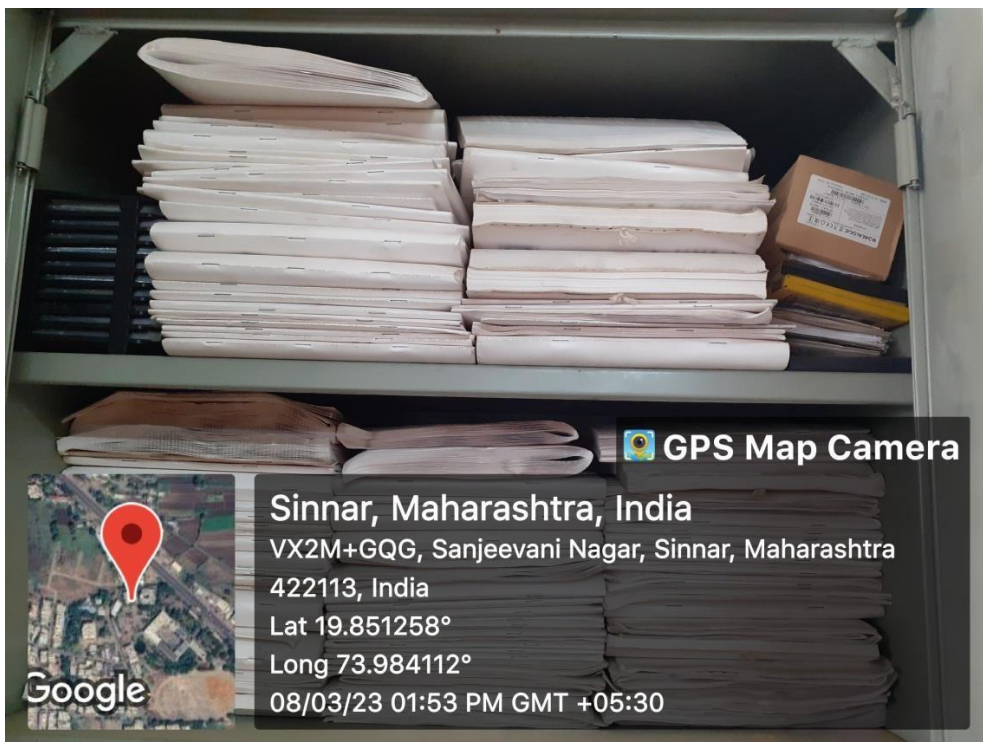
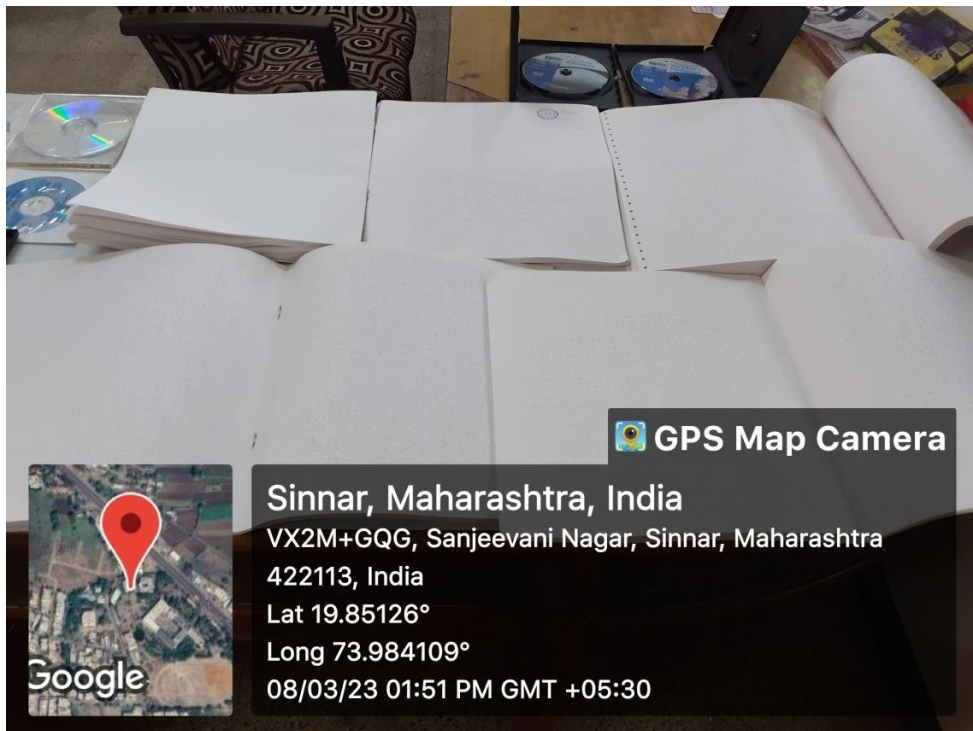
Wheelchairs

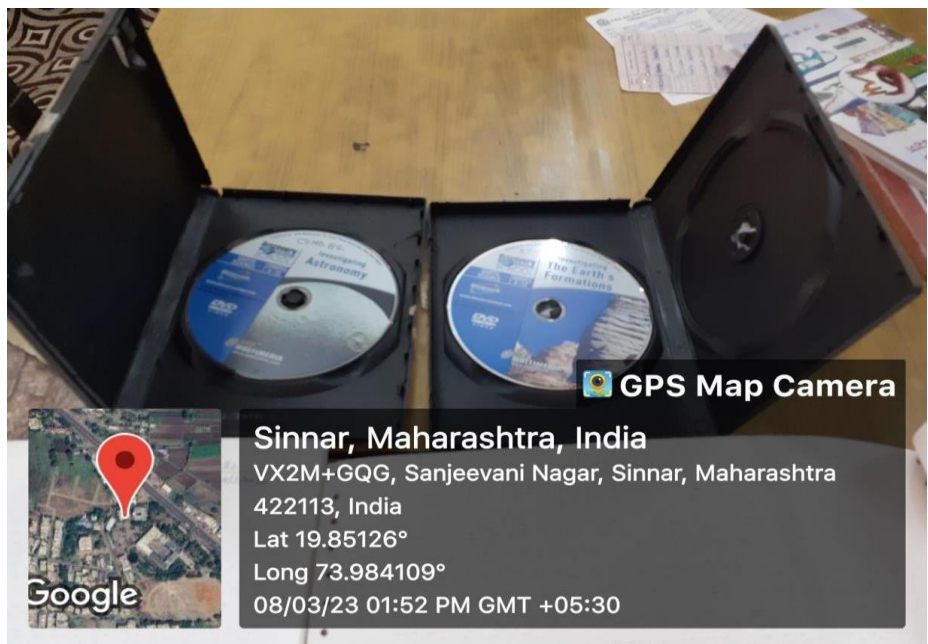
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Photos of Reading Material for Divyangjan





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