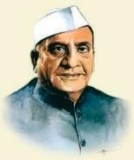
SHRI SHIVAJI EDUCATION SOCIETY, AMRAVATI'S

SHRI SHIVAJI SCIENCE COLLEGE, AMRAVATI



NAAC Accredited by Grade A with CGPA 3.13 (3rd Cycle)
UGC awarded status of College with Potential for Excellence (2nd Phase)
ISO 9000:2015 Certified College
Idenified by DST , Govt. Of India for FIST & Sant GadgeBaba Amravati University as Lead College

4TH Cycle
Assessment & Accreditation by NAAC

Criterion-VII
INSTITUTIONAL VALUES AND BEST PRACTICES

QlM – 7.1.3

Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste

Contents

a. Solid waste management	Y
b. Liquid waste management	Y
c. Biomedical waste management	--
d. E-waste management	Y
e. Waste recycling system	Y
f. Hazardous chemicals and radioactive waste management	Y

Accredited by NAAC with 'A' grade with a CGPA of 3.13
UGC Awarded College with Potential for Excellence ISO 9000:2015 certified College
Identified by DST for FIST and SGB Amravati University as Lead College

Shri Shivaji Science College

Shivaji Nagar, Morshi Road, Amravati - 444 603 M.S.

❖*Founder* : Dr. Panjabrao Alias Bhausaheb Deshmukh
❖*President* : Hon. Shri Harshwardhan P. Deshmukh
❖*Principal* : Dr. G. V. Korpe

E-mail : shivajiscamt.office@gmail.com
Web Site : www.shivajiscamt.org
(O) 2660855; *(Fax)* 2665485;(R)2551400

Ref. No.: SSSC/6471/IQAC/2021 Date: Nov. 22nd, 2021

Declaration

The information, reports, true copies of the supporting documents, numerical data, etc. furnished in this file is verified by IQAC and found correct.

Hence this certificate.

H. S. Lunge
IQAC Coordinator
Shri Shivaji Science College
Amravati

G. V. Korpe
Chairman IQAC and Principal
Shri Shivaji Science College,
Amravati

a) Solid waste management

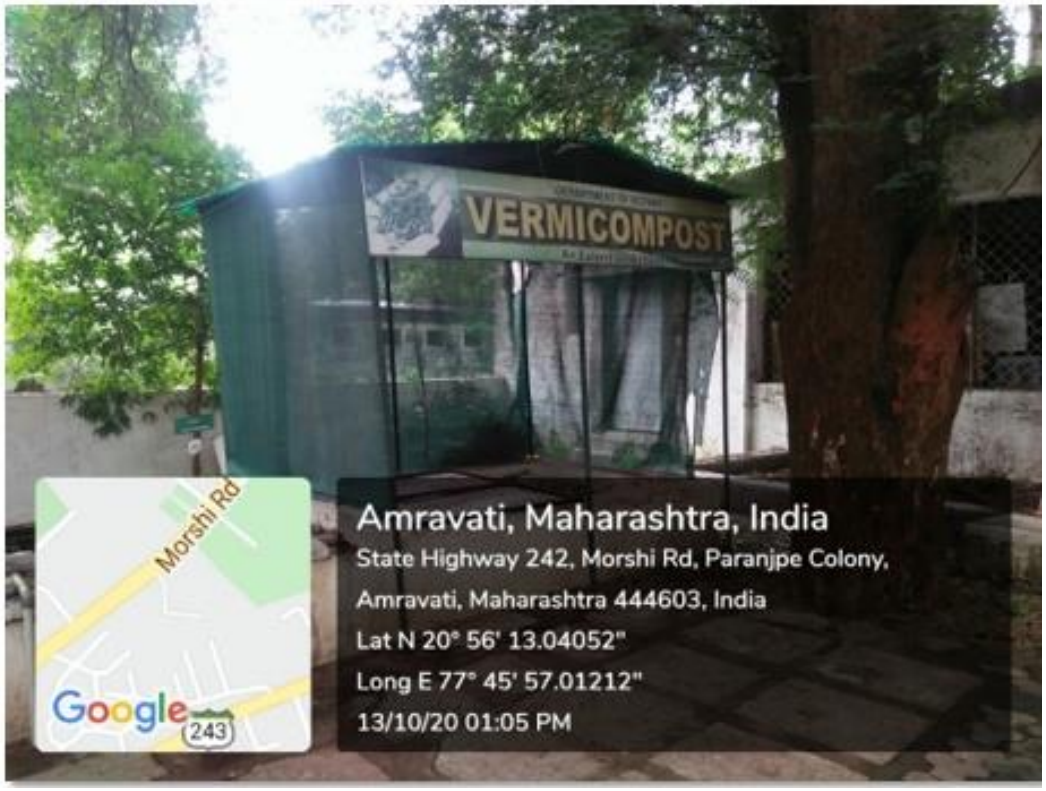
1)Plastic Carry Bags, Disposable Cups and Plates, Tissue Papers are Banned in the College Campus

Posters for Awareness and Promotionof plastic Ban in the college campus

Posters for Awareness and Promotion of plastic Ban in the college campus

Posters for Awareness and Promotion of plastic Ban in the college campus

2) Vermicompost Unit in College Campus



Vermicompost Unit in the College Campus

Vermicompost Unit in the College Campus

3) Dust bins in the campus

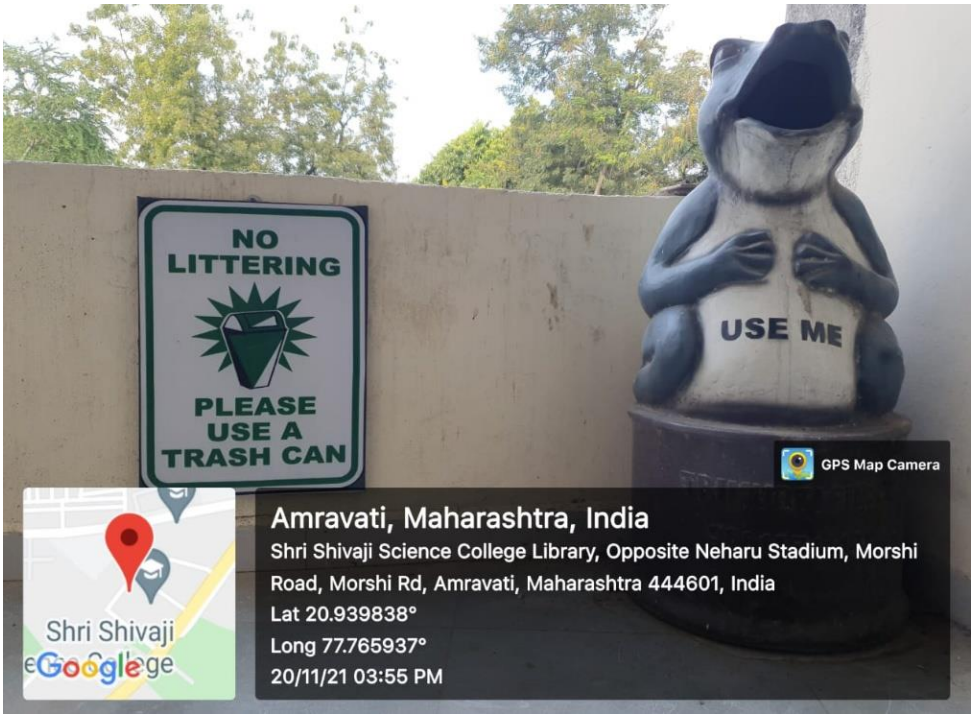
College Premises have separate dust bins for wet and dry garbage

Green and Blue Dust Bins for Wet Waste and Dry Waste

Two different-colored Dust bins in the laboratories for the separation of solid wastes

Red and Green Dustbins in the Chemistry Lab

4) Sign Boards with Slogans- 'Do Not Litter'



Dust Bin in the College Campus with 'No littering' message

'Please Don't Litter'poster near the college canteen

b) Liquid waste management (SAW)

1) Non Hazardous Liquid waste is drained to soak pits

Laboratory liquid waste management system through percolation system: -

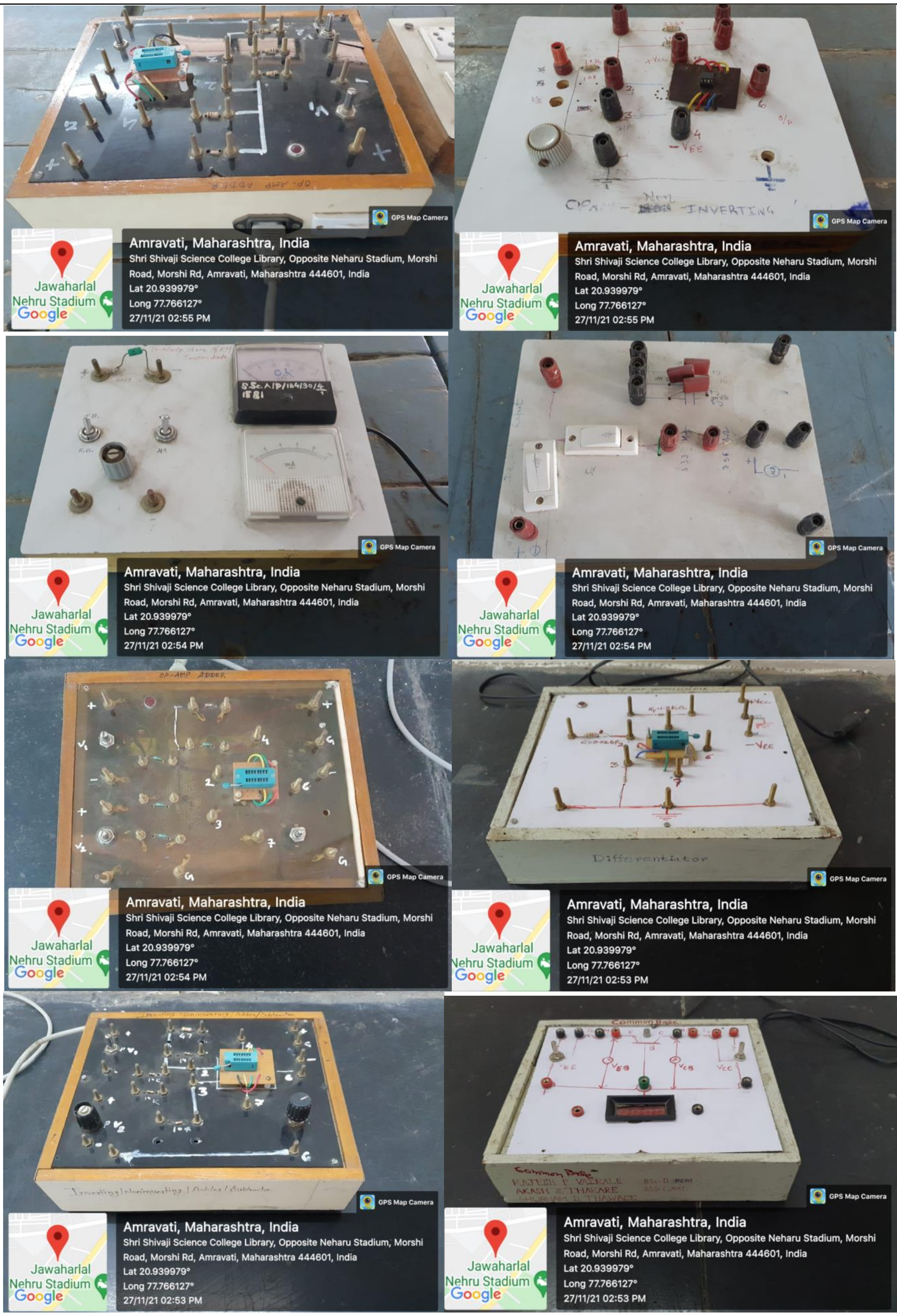
Two Soak Pits for groundwater recharge are constructed for the non-hazardous liquid waste generated from labs. Chemistry laboratory has a separate basin marked with hazardous chemical waste. In this liquid waste can be defined as waste water of practical without chemical. This is the liquid used for washing purpose other than reaction. As this liquid is not hazardous to environment, it can be percolated in the soil so as to avoid stagnant water and to facilitate ground water recharge. The hazardous liquid containing chemicals is drained to Laboratory Hazardous Chemical Waste Disposal Unit. The waste liquid of both the Chemistry laboratories is percolated in to the soil throughthe different water percolation system. This percolation pit is also like rain water harvesting system. The pit is filled with gravel/pebbles followed by river sand for better percolation.

Soak Pits for Non Hazardous Liquid Waste Management

d) E-waste management

1) Physics Department has fabricated experimental kits using E-waste.

Various Hand-made electric kits made from the e-waste by UG students of the Department of Physics for the Physics lab



Various Hand-made electric kits made from the e-waste by UG students of the Department of Physics for the Physics lab

DEPARTMENT OF PHYSICS

DETAILS OF THE FABRICATION OF EXPERIMENTAL KITS / SETUP BY UG STUDENTS

Waste management Steps Include

- A minimal e-waste generation is ensured by periodic maintenance of computers, electrical and electronicequipment.
- Troubleshooting in equipment's and experimental kits is done by faculty and laboratorystaff.
- Minorrepairsaredonebythestudentsundertheguidanceoffaculty.
- Components and other small devices/parts of non-repairable equipment's are used to fabricate new experimental kits / power supplies.ThisisoneofthebestpracticesofthePhysicsdepartment.

The department of Physics have contributed a bit to counter this issue in the last few years.

The department has started reusing the electronic components from the discarded instruments, PCs, UPS, etc. such as transformers, transistors, ICs, Capacitors, Inductors, Resistors, Connectors, Sockets, Switches, Wires, LEDs and other electronic or electrical devices to fabricate the instruments and experimental kits that are used in the Physics Laboratory.

The students and faculty have also involved in the maintenance and repairs of the instrumentsand experimental kits, which led to increase their life and the optimum uses. This have not only become a step towards the E-waste management but also cultivated innovative ideas among the students and the faculty.The students have also gained many skills through these activities.

The highlighting outcome of this activity has seen during the COVID-19 Pandemic. The students in consultation with teachers have **fabricated UV sterilizingchamberandautomaticliquidsanitizerdispenser**machine throughhouse-holdewasteanditisthendistributedtoneedypeople.

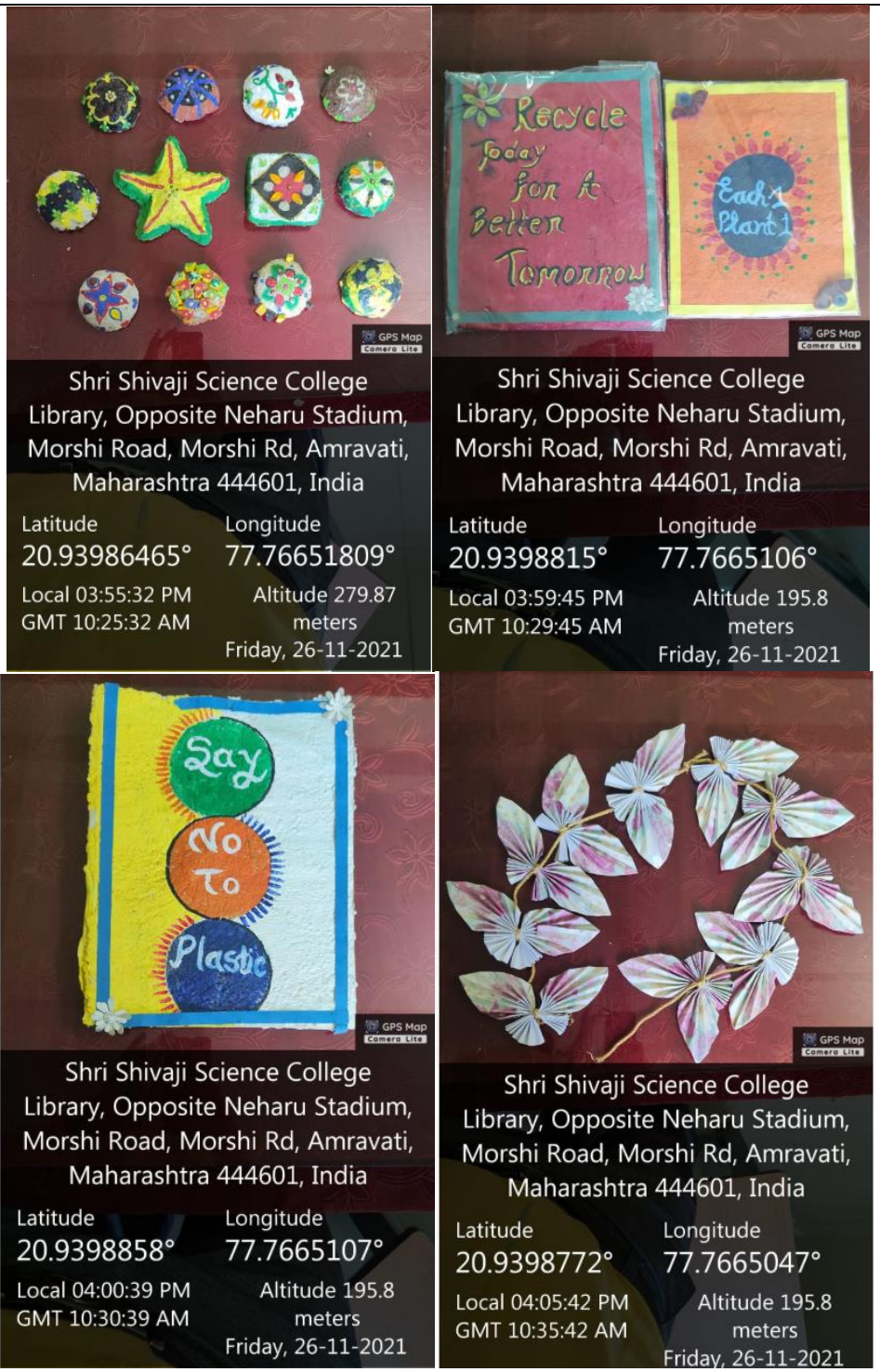
S.N.	Name of the Experimental Kit/ Setup	No. of sets/Kits
1	Determination of coefficient of restitution	1
2	Moment of inertia of a rod by bifilar pendulum	2
3	Zener diode as a regulator	2

4	PN diode as a rectifier	2
5	Self-inductance by bridge rectifier method	1
6	Heating efficiency of electrical Kettle with varying voltages.	1
7	Compact primary & secondary circuit for measurement of low resistance by potentiometer method.	1
8	Measurement of inductance by phaser diagram method.	2
9	Measurement of capacitance by phaser diagram method.	2
10	Study of frequency resonance of series LCR circuit and determination of Q-factor.	1
11	To determine high resistance by leakage method.	2
12	Verification of laws of capacitances.	2
13	Study of transformer.	2
14	Verification of Maximum power transfer theorem.	2
15	Verification of Thevenin's theorem.	2
16	Verification of Norton's theorem.	2
17	Verification of Milliman's theorem.	2
18	Investigate effect of C, L and Pi- filters on half wave, and full wave bridge rectifier.	2
19	OPAMP as Inverting amplifier	4
20	OPAMP as Non- Inverting amplifier	4
21	OPAMP as an adder	4
22	OPAMP as sub-tractor	4
23	OPAMP as an Integrator	4
24	OPAMP as a differentiator	4
25	FET Characteristics	2
26	BJT Characteristics in CE mode	2
27	BJT Characteristics in CB mode	2
28	Study of Transistor Amplifier with and without feedback	2
29	Study of Transistor Amplifier : Variation of gain with load and frequency	2
30	Curie temperature of ferromagnetic material	1
31	Determination of Fermi energy.	1
32	Study of monostable Multivibrator.	2

33	Study of astable Multivibrator.	2
34	Study of Hartley Oscillator	1
35	Study of Colpit Oscillator	1
36	Planck's constant using Black Body Radiation	1
37	Characteristics of Photovoltaic cell.	1
38	Study of thermoelectric effect	1
39	Measurement of Fermi energy of Metals	1
40	Study of Fourier Series	1
41	Dual Power Supply	10
42	Lattice dynamic Kit : Mono and Di atomic	1

e) Paper-Waste Recycling by the Department of Environmental Science

Waste paper is used to make artefacts by the department of Environmental Science and on 'Ganesh Utsav' 'Ganesh Idols made from the waste-paper is promoted



Artefacts made from Waste-paper by the students of the Department of Environmental Science

Artefacts made from Waste-paper by the students of the Department of Environmental Science

f) HAZARDOUS CHEMICAL MANAGEMENT

1) The basin in the Chemistry Lab is marked for the disposal of hazardous chemical waste and all the chemical waste is collected in the tank outside of the laboratory.

Basins marked for the disposal of the hazardous chemical waste

Hazardous Chemical waste is collected in the tank outside of the laboratory Unit-1

Hazardous Chemical waste is collected in the tank outside of the laboratory Unit-2