



Supporting Documents for Metric No. 7.1.2

7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

1. Solar energy
2. Biogas plant
3. Wheeling to the Grid
4. Sensor-based energy conservation
5. Use of LED bulbs/ power efficient equipment

Options:

- A. 4 or All of the above
- B. 3 of the above
- C. 2 of the above
- D. 1 of the above
- E. None of the above

Ans.A. 4 or All of the above

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Document No.01:

Policy documents of the institution

Policy No. 01: Environment Policy Statement



Mula Education Society's

Arts, Commerce and Science College, Sonai

Tal. Newasa, Dist. Ahmednagar, Maharashtra

ENVIRONMENT POLICY STATEMENT

Revised – 2017

(As subject no. 6th approved in the second CDC meeting held on 11/08/2017)

I. Preamble

The Mula Education Society's (MES) Arts, Commerce and Science (ACS) College is very keen to protect environment and any of the activities practiced in the institution are framed not to cause any harm to the environment. Specific action would be taken to prevent the harm. The primary goal of environmental policy is to protect natural systems. It is, therefore, a core value of the institute to preserve and protect the environment. As we advance, scientific understanding regarding the fundamental interrelationship between human health and the environment, we will proactively demonstrate our commitment to environmental stewardship and sustainable development.

Through implementation of this policy, MES's ACS College, will serve as a leader by advancing environmental conservation commitment within our own programs and facilities, and in the broader community.

II. Aims and Objectives of the Policy:

- i. Develop and maintain environmental management programs with objectives and targets to minimize adverse environmental impacts.
- ii. Comply with all applicable environmental, health, and safety laws, regulations, and other requirements.
- iii. Implement effective pollution prevention and waste minimization programs to reduce, reuse, and recycle materials.
- iv. Ensure that energy and water are used responsibly and conserved through innovative practices and procedures.
- v. Provide all institute staff with the knowledge and tools needed to meet the goals of this policy and to actively participate in efforts to prevent negative environmental impacts.
- vi. Measure progress toward our environmental goals.

III. The Policy

Accordingly, it is resolved that the MES's ACS College will:

1. Provide facilities for alternate sources of energy and energy conservation measures like:

- Solar energy
- Biogas plant
- Wheeling to the Grid
- Sensor-based energy conservation
- Use of LED bulbs/ power efficient equipment etc.

2. Create facilities for the management of the following types of degradable and non-degradable wastes:

- Solid waste management
- Liquid waste management
- E-waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management.

3. Provide Water Management and Water conservation facilities like:

- Rain water harvesting
- Bore well /Open well recharge
- Construction of tanks and bunds
- Waste water recycling
- Maintenance of water bodies and distribution system in the campus

4. Take Green campus initiatives like:

- Restricted entry of automobiles
- Use of Bicycles/ Battery powered vehicles
- Pedestrian Friendly pathways
- Ban on use of Plastic
- landscaping with trees and plants

5. Regularly conduct quality audits on environment and energy, which include:

- Green audit
- Energy audit
- Environment audit
- Clean and green campus recognitions/awards
- Beyond the campus environmental promotional activities

6. Implement Carbon Management Strategy, which include:

- To implement a carbon management strategy, including the efficient use of energy.

- To reduce greenhouse gas emissions in the college campus.
- To ensure the uptake of low carbon technologies in buildings and equipment.

7. Provide Awareness and Training:


- To communicate internally and externally, the college's environmental objectives and performance.
- To raise awareness of staff and students about the college's environmental impact, activities and performance and good practices.
- To provide appropriate environmental educational programmes for staff and students.
- To encourage and facilitate feedback and suggestions on ensuring good practices.
- Evaluation of Environmental Policy.
- To undertake a regular review of environmental management procedures and activities to ensure suitability, adequacy and effectiveness.

IV. Responsibilities:

- The main responsibility for implementation of this policy lies with the Students, Teaching and non-teaching staff and Principal of College.
- The Heads of departments are responsible for ensuring compliance with Environment Policy within their area of control.
- The committee will actively monitor the performance of Colleges and Divisions in the implementation of the aims and objectives of this Policy in the activities under their control.
- Whilst the college accepts the main responsibility for implementation of this policy, individuals have a very important role in co-operating with those responsible for safeguarding the environment. Individuals are required to abide by rules and requirements made under the authority of this policy.




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Joint Secretary
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**Policy No. 02: Policy on Systems and Procedures for Maintaining Physical,
Academic and Support Facilities**

**POLICY ON SYSTEMS AND PROCEDURES FOR
MAINTAINING PHYSICAL, ACADEMIC AND
SUPPORT FACILITIES**



Revised - 2017

(As subject no. 6th approved in the second CDC meeting held on 11/08/2017)



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Policy on Systems and Procedures for Maintaining Physical, Academic and Support Facilities

Revised - 2017

(As subject no. 6th approved in the second CDC meeting held on 11/08/2017)

1. Preamble:

The present document, "Policy on Systems and Procedures for Maintaining Physical, Academic and Support facilities" of Arts, Commerce and Science College, Sonai, emphasizes and lays established procedures and practices for maintaining and utilizing physical, academic and support facilities, like laboratory, library, sports complex, computers, classrooms, etc., in the institution

2. Definition:

- a) **Physical Facilities:** The physical facilities available in the college include, an auditorium, a multipurpose hall, Canteen, parking facility, 'Internal Quality Assurance Cell', Public addressing system, electric equipment, toilets, water coolers, fire extinguishers and a Power generator and a Solar system.
- b) **Academic and Support Facilities:** These include, Classrooms, Laboratories, Library, Seminar halls, cabins for heads of departments, Staff room, Sports facility, Girls Hostel, Canteen, Health Centre, Placement cell, Transportation, Playground, Indoor sports facility, Computers, LCD projectors, Audio visual equipment etc.

3. Systems available in the Institution for Maintaining Physical Academic and Support Facilities:

The following well established systems are available for maintaining physical, academic and support facilities.

- i. Budget provisions are made available every year, for repairs and maintenance of old Physical, Academic and Support facilities.

- ii. Budget provision is also available for renovating existing Physical, Academic and Support facilities.
- iii. Departmental requirement for maintenance of old existing facilities is collected every year and approved in the College Development Committee meeting.
- iv. The institution has annual maintenance contract (AMC) for maintaining computers and some specific major equipment in the laboratories.
- v. Common physical facilities and equipment are maintained through outsourcing from local service providers on regular basis.

4. Policy on Procedures for Maintenance of Physical, Academic and Support Facilities:

a). Physical Facilities:

- i. Renovation and repairs of existing building, water and public conveniences, are looked after by the civil engineer of the education society.
- ii. Regular cleaning of water tanks, proper garbage disposal, pest control, landscaping and maintenance of lawns is done by the Institution.
- iii. Maintenance of water purifiers, electric equipment, reprography machines, CCTV cameras, fire extinguishers, power house, PA systems, etc. is done by outsourcing.

b) Laboratories:

- i. Procedure for maintenance of laboratory equipment is as per the procedure No. AC/PR/19 of the Academic Process Manual, prepared for ISO 9001:2015.
- ii. An 'Instrument Usage Register' is maintained in the laboratory to record the names of students using the instruments.
- iii. Laboratory staff are trained to maintain the cleanliness of laboratories, maintenance of equipment and safe disposal of hazardous waste chemicals.

c). Library:

- i. The Library has a 'Library Advisory Committee' which consists of heads of the department and senior faculty members.
- ii. The committee meets once in a year, and discusses budgetary provision for the purchase of new books as per the list suggested by the faculty members handling different subjects and as per the student feedback. Library committee also takes decisions about monitoring library equipment, Verification, writing-off and purchase of books.

d). Sports Complex:

- i. The department has a separate 'Sports manual' detailing the systems and procedures.
- ii. There is a 'Sports Equipment Maintenance Register' in the department to record the usage and maintenance details. It is maintained by the Director of Physical Education.
- iii. 'Student Sports Material Issue Register' is maintained to issue and collect back the sports equipment.

e). Class rooms:

- i. Classrooms are equipped and furnished with wooden and steel benches, green glass boards and LCD projectors.
- ii. House Keeping Services are taken care by the Sweeper and Cleaning Staff

f). Computers:

- i. The college has a good number of computers used in administrative work.
- ii. A College Management Enterprise Resource Planning (ERP) software 'Vridhhi' is used in all departments of the college, for routine practices like, online admissions, student eligibility, rollcall, scholarship, library, examination and accounts.
- iii. Annual Maintenance Contract was made with Vridhhi Software Solutions Private Limited, Malegaon to maintain the 'Vridhhi' software.




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Document No.02:

Geo tagged photographs and videos of the facilities
with caption

1. Alternate sources of energy and energy conservation measures

1. Solar energy equipment



Solar Panels on *Vidnyan Bhawan*(Capacity: 1 KW)



Inverter System of Solar Panels in *Vidnyan Bhawan*



Solar Panels in Mula Education Society's Campus (Capacity: 10 KW)



Solar Water Heater on Boys Hostel (Capacity: 2000 Ltr)

Manufactured by Sudarshan Saur



Solar Water Heater on Ladies Hostel (Capacity: 4000 Ltr)



Solar Water Heater on Ladies Hostel (Capacity: 4000 Ltr)

Manufactured by Sudarshan Saur

Solar water heating system is a device that helps in heating water by using the energy from the SUN. This energy is totally free. Solar energy (sun rays) is used for heating water.

Benefits:

- **No fossil fuel required**
- **Environmental friendly, Simple and Safe**

2. Wheeling to the Grid



Inverter is used to 10 KW Solar panel- Wheeling to the Grid in Institution Campus

The energy output of the solar panels is utilized for the power requirements of the institute. Excess electricity produced through solar panel is given to Maharashtra State Electricity Board (MSEB) through grid. MSEB cut downs the number units supplied from the number units utilized by the institute.

3. Sensor-based Energy Conservation equipment



Water Bath in Dept. of Botany (Research Lab)

Working principle of water bath:

The sensor transfer water temperature to resistance value, amplified and compared by integrated amplifier, then output the control signal, efficiently control the average heating power of electric heating tube and maintain water in constant temperature.



Bioreactor in Dept. of Botany (Research Lab)

The bioreactor is the heart of any biochemical process as it provides an environment for microorganisms to obtain optimal growth and produce metabolites for the biotransformation and bioconversion of substrates into desirable products.



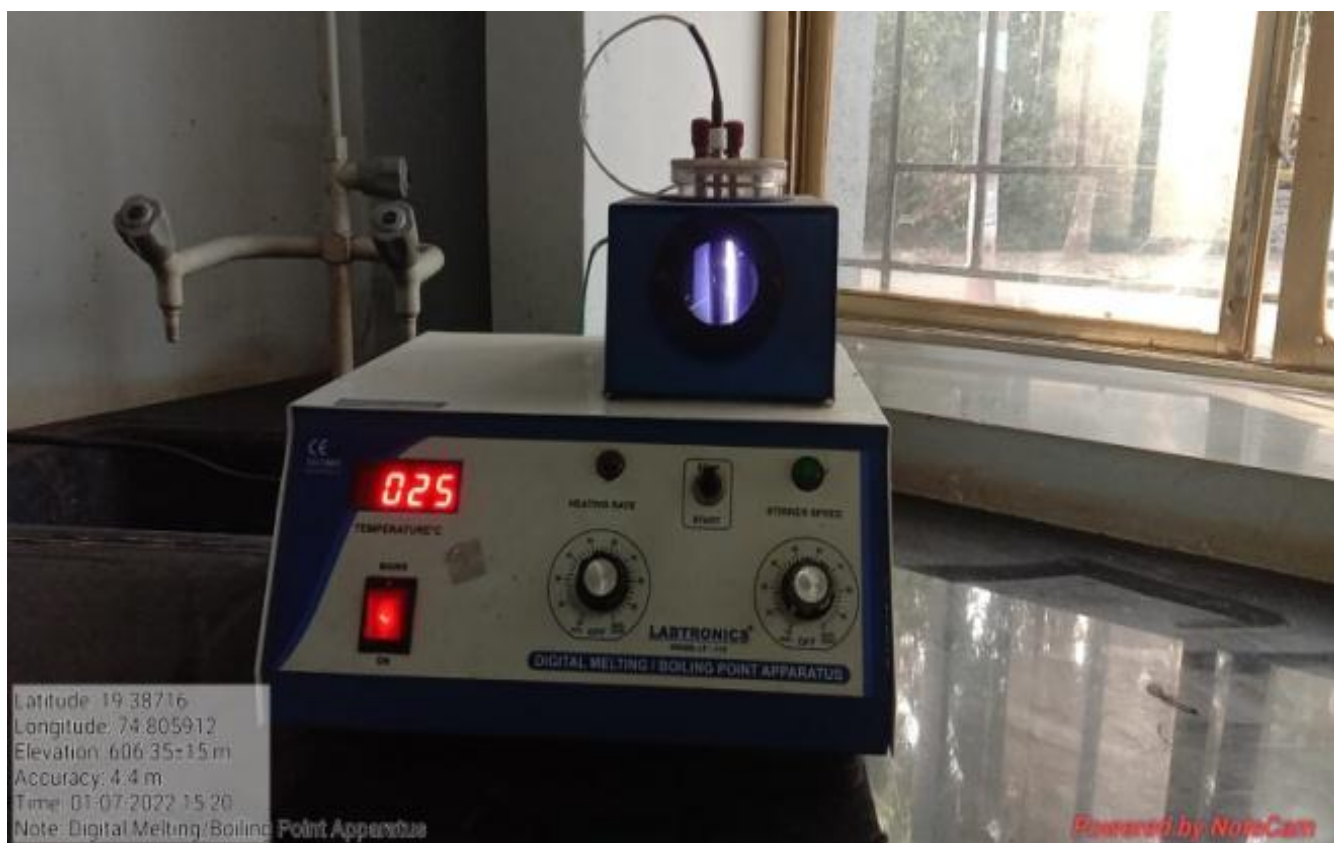
Latitude: 19.387309
Longitude: 74.805807
Elevation: 526.65±20 m
Accuracy: 15.3 m
Time: 03-17-2022 11:46

Note: Sensor Based Autoclave in Botany Lab

Powered by NoteCam

Autoclave in Dept. of Botany (Research Lab)

The autoclave works on the principle of moist heat sterilization. The high pressure inside the chamber increases the boiling point of water for the sterilization of equipment. The higher pressure also ensures the rapid penetration of heat into the deeper parts of equipment.



Digital Melting and Boiling Point Apparatus in Dept. of Chemistry (Research Lab)

A melting point apparatus typically works on the principle of reflectance and transmittance of light falling on and passing through the sample.

Sensor Based Energy Conservation systems results in substantial energy conservation, if properly used.

4. Use of LED Lights/ Power efficient equipment



LED Lights in E-Content Development Lab



LED Lights in IQAC



LED Lights in Seminar Hall



LED Lights in Principal Cabin

The institution is moving towards 100% led lights. Majority of the class rooms, laboratories, administrative blocks, computer centers, libraries, seminar halls and staff rooms were provided with LED lighting system which are supposed to be the energy efficient.

LEDs offer several advantages

- **Long life & Energy Efficient**
- **High brightness and intensity**
- **Exceptional color range**
- **Low radiated heat**

Power Efficient Equipment



Digital Smart Board -Power Efficient Equipment in E-Content Development Lab



Power Efficient Equipment in E-Content Development Lab



Computer

“Screen saver” saves energy, reduces your electricity bill,increases your battery life. The power save feature on your computer automatically switches off the monitor when the computer hasn't been used for a set period of time, saving energy bills.Enable the sleep mode on your monitor if you aren't going to use your PC for more than 20 minutes.



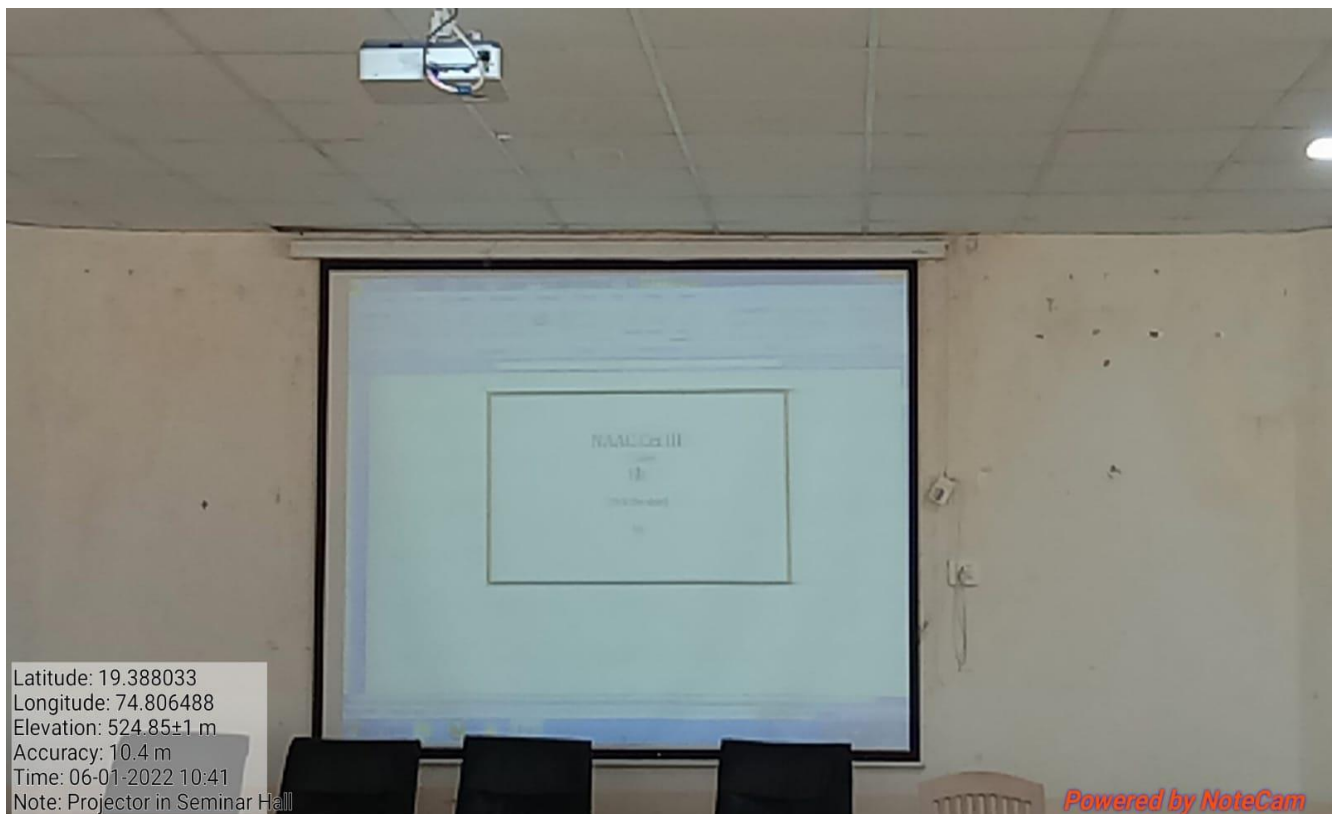
3 Star Rating Power Efficient AC in E- Content Development Lab



A star rating of an air conditioner is an indicator of its energy efficiency. The higher the number of stars, the more efficient it is.



Projector in IQAC



Projector in Seminar Hall

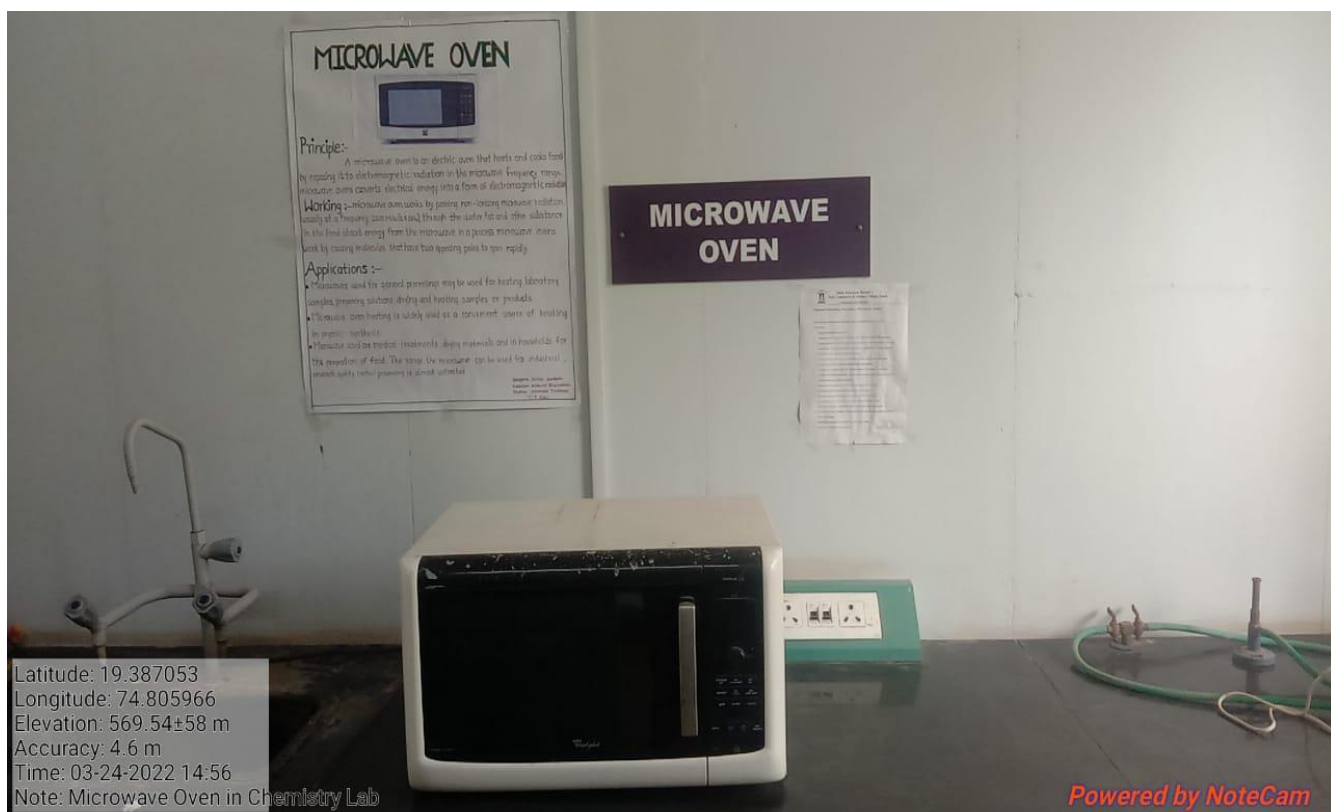
When you select [Standby], the projector is turned off automatically if there is no signal input to the projector for 5 minutes or more, and then it goes into standby.



5 Star Rating Power Efficient Fridge in Dept. of B.Voc



A 5 star fridge has a more efficient compressor and is insulated better to avoid heat loss. Due to this, they are very efficient in energy saving. A 5 star fridge is expensive, but they help to save a lot on electricity bills and are good for the long run.



Microwave oven minimizes consumption of electricity for research work and practical



Ultrasonic bath minimize consumption of electricity for research work and practical