



**ENVIRONMENT  
AUDIT REPORT**

**M.E.S ASMABI COLLEGE  
P.VEMBALLUR**

**2023**

Executed by



# ENVIRONMENT AUDIT REPORT

## M.E.S ASMABI COLLEGE

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P. VEMBALLUR







Environment Audit Report  
MES Asmabi College, P.Vemballur  
EA 1076, 2023

#### **Audit Team**

Ottotractions

- |   |                      |                                   |
|---|----------------------|-----------------------------------|
| 1 | Er. Suresh Babu B V, | Accredited Energy Auditor, AEA 33 |
| 2 | Er. B. Zachariah,    | Director, Ottotractions           |
| 3 | Er. Abin Baby,       | Project Engineer,                 |
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#### **About OTTOTRACTIONS**

*OTTOTRACTIONS established in 2005, is an organization with proven track record and knowledge in the field of energy, engineering, and environmental services. They are the first Accredited Energy Auditor from Kerala for conducting Mandatory Energy Audits in Designated Consumers as per Energy Conservation Act-2001. Government of Kerala recognized and appreciated OTTOTRACTIONS by presenting its prestigious "The Kerala State Energy Conservation Award 2009" for the best performance as an Energy Auditor. Ottotractions is an ISO 9001-2015, ISO 17020-2012 and ISO 14001-2015 Certified organization, which ensures the quality of its services.*

## Acknowledgment

We were privileged to work together with the administration and staff of M.E.S Asmabi College, P.Vemballur for their timely help extended to complete the audit and bringing out this report.

With gratitude, we acknowledge the diligent effort and commitments of all those who have helped to bring out this report.

We also take this opportunity to thank the bona-fide efforts of team OTTOTRACTIONS for unstinted support in carrying out this audit.

We thank our consultants, engineers and backup staff for their dedication to bring this report.

Thank you.

**SURESH  
BABU B V**

B V Suresh Babu  
Accredited Energy Auditor  
AEA 33, Bureau of Energy Efficiency  
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Digitally signed by Suresh Babu B V  
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# INTRODUCTION

M.E.S Asmabi College, P.Vemballur has entrusted Ottotractions to carry out an environment audit of their campus building.

Each section contains recommendations for improvements relating to environmental issues, which are consolidated in the action plan in section 4.





## BACKGROUND

M.E.S. Asmabi College, a premier educational institution managed by the Muslim Educational Society (Regd.) Calicut, owes its existence to the remarkable foresight and unremitting zeal of the late Dr. P.K. Abdul Gafoor, the late P.K. Abdulla I.A.S., Dr. M.A. Abdulla and late Dr. A.K. Siddiq Karikulam Azhikode. The institution was established in the year 1968 at P.Vemballur, Kodungallur, a remote coastal backward village in the S.N. Puram Panchayath, of Thrissur District. The main objective of the institution is to uplift the educationally backward community,

especially Muslims of the area who had been denied of the right to education for generations.

The college now caters to the needs of the students throughout Kerala and Lakshadweep, cutting across the barriers of class, caste, creed and religion. Hajee Ismail Essa Sait of Cochin initially donated the land and building and the college was named after his mother "Asmabi".

The college which enjoys 2F and 12B status of the U.G.C. is affiliated to the Calicut University. At present it provides higher education to 2500 above students in seventeen Under Graduate Programmes, six Post Graduate Programmes and three Research centres. The College is re-accredited by the NAAC at B++ level in March 2019.



<b>Occupancy Details</b>					
<b>Particulars</b>	<b>2018-19</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>
<b>Total Students</b>	1896	2113	2360	2544	2566
<b>Staffs</b>	114	121	120	125	118
<b>Total Occupancy of the college</b>	2010	2234	2480	2669	2684

Total student strength of the campus is 2684. For calculating per capita carbon emission estimation, the student strength is taken into account.





# ENVIRONMENTAL ISSUES

This section is broken down into the following different areas: waste, water, energy, resource and materials use and procurement. A final 'other' section is also included for any additional issues.

## 1.1. Waste

The way communities generate and manage their waste plays an absolutely key role in their ability to use resources efficiently. All buildings contain bins for both general waste and mixed recyclables (plastic bottles, card, cans and paper). On average each floor in the buildings areas has its own general waste bin and one recycling bin. When the bins are emptied by the cleaning staff. Bins are marked and kept in different colors for identification, however in some locations throughout the building it was unclear which bins were for which waste streams.

There are four basic ways in which campus can do **plastic recycling collection** services for **plastic** bottles and containers – curbside, drop-off, buy-back or deposit/refund programs. The first, and most widely accessible, **collection** method is curbside **collection** of recyclables. The campus is installed bins to collect plastic bottles and single use plastics. The college has given a proper awareness on plastic waste problems and they are discouraging the students or teachers to carry plastics to the campus.



The major concern of waste management will be focused on the solid waste produced by the campus. Solid wastes produced in the campus are mainly of three types, food waste, paper waste, and plastic waste. Food wastes produced in the campus are mainly by two means. The vegetable wastes produced in the kitchen during the food preparation. The food waste produced by the students and staffs of the campus after the consumption of meals. The degradable waste can treated in the biogas plant.



<b>Degradable Waste Generation</b>					
<b>M.E.S Asmabi College, P.Vemballur</b>					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Total Occupancy	2010	2234	2480	2669	2684
Waste generated in kg /day	40.2	44.68	49.6	53.38	53.68
Waste generated in kg /Yr	8844	9829.6	10912	11743.6	11809.6

Burning plastics shall be strictly restricted inside the campus. **Burning plastic** and other wastes releases dangerous substances such as heavy metals, Persistent Organic Pollutants, and other toxics into the air and ash waste residues. Such pollutants contribute to the development of asthma, cancer, endocrine disruption, and the global burden of disease.

<b>Solid non degradable Waste Generation</b>					
<b>M.E.S Asmabi College, P.Vemballur</b>					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Total Occupancy	2010	2234	2480	2669	2684
Waste paper generated in kg /day	0.402	0.4468	0.496	0.5338	0.5368
Waste plastic generated in kg /day	0.603	0.6702	0.744	0.8007	0.8052
Waste paper generated in kg /Yr	88.44	98.30	109.12	117.44	118.10
Waste plastic generated in kg /Yr	132.66	147.44	163.68	176.15	177.14

<b>WASTE MINIMIZATION AND RECYCLING</b>		
1	Does your institute generate any waste? If so, what are they?	Yes, Solid waste, paper, plastic, Horticulture Waste etc.
2	What is the approximate amount of waste generated per day? (in Kilograms/) (approx.)	19.6
3	How is the waste generated in the institute managed? By	Reuse of one side printed Paper for internal communication. Kitchen waste can used to generate manures and biogas. Two types of Waste bins are provided at campus for biodegradable and non-biodegradable waste.

	1	Composting	In-house
	2	Recycling	In-house
	3	Reusing	In-house
	4	Others (specify)	
4	Do you use recycled paper in institute?		Yes
5	Do you use reused paper in institute?		Yes
6	How would you spread the message of recycling to others in the community? Have you taken any initiatives? If yes, please specify.		Number of awareness programs through NSS and Nature Club.
7	Can you achieve zero garbage in your institute? If yes, how?		Not yet achieved. Possible through waste management plan.

Green Cover Audit			
1	Is there a garden in your institute?	Yes	
2	Do students spend time in the garden?	Yes	
3	Total number of Plants in Campus	Plant type	Approx. number
		Trees	299
		Ornamental	Not estimated
4	Number of Tree Plantation Drives organized by School per annum. (If Any)	Yes, through Environmental club plantation drives are organized.	
5	Number of Trees Planted in Last FY.	5	
	Survival Rate	95%	

All the activities including energy consumption and waste management have their equivalent carbon emission and they positively contribute to the carbon footprint of the campus. Carbon sequestration is the reverse process, at which the emitted carbon dioxide will get sequestered according to the type of carbon sequestration employed. Even though there are many natural sequestration processes are involved in a campus, the major type of sequestration among them is the carbon sequestration by trees.

Trees sequester carbon dioxide through the biochemical process of photosynthesis and it is stored as carbon in their trunk, branches, leaves and roots. The amount of

carbon sequestered by a tree can be calculated by different methods. In this study, the volumetric approach was taken into account, thus the details including CBH (Circumference at Breast Height), height, average age, and total number of the trees, are required. Detailed table is included in the technical supplement.

Carbon Sequestration					
Particulars	2018-19	2019-20	2020-21	2021-22	2022-23
Total No of Trees	296	296	298	299	299
Carbon sequestered by trees in the campus (tCO <sub>2</sub> e)	14.0	14.3	14.59	14.89	15.20

Carbon sequestered by a tree can be found out by using different methods. Since this study is employed the volumetric approach, the calculation consists of five processes.

- Determining the total weight of the tree
- Determining the dry weight of the tree
- Determining the weight of carbon in the tree
- Determining the weight of CO<sub>2</sub> sequestered in the tree
- Determining the weight of CO<sub>2</sub> sequestered in the tree per year

Carbon sequestered by each species of trees in the campus compound is given in the Table. Detailed calculation results are listed out in the tables provided in the technical supplements of 'Carbon sequestration'.





### 3.1.1 ENERGY

#### a. Electricity

The total emission of the carbon dioxide per student is **16.71** kg per year. Emission reduction plans were prepared to bring the existing per capita carbon footprint to zero or below so as to bring the campus a carbon neutral or carbon negative campus. All energy efficiency projects shall be implemented, So, the effective specific carbon emission per student is -1.69kg of CO<sub>2</sub> per year only. This can be achieved in many ways but, every alternate plan must be in such a way that, it must fulfill the actual purpose of each activity that is considered.

Here, three major methods are taken in to account as the plans for reducing the carbon emission of the campus.

- Resource optimization
- Energy efficiency
- Renewable energy

#### Electricity Consumption

Electricity Connection Details		
M.E.S Asmabi College, P.Vemballur		
1	Name of the Consumer	M.E.S Asmabi College, P.Vemballur
2	Tariff	LT-6A Ndom, LT-6F Ndom, LT-6B Ndom
3	Consumer Numbers	1156615000409, 1156611032948, 1156619000713, 1156616007485
5	Connected Load Total (kW)	89
6	Annual Electricity Consumption (kWh)	74999

Annual Electricity Consumption (kWh)						
Consumer No	2018-19	2019-20	2020-21	2021-22	2022-23	Connected Load (kW)
1156615000409	49566	20967	23737	36609	42799	65
1156611032948	29419	0	0	0	14904	12
1156619000713	23598	11293	1725	2773	11099	3
1156616007485	18607	12620	9948	9778	6198	9
<b>Total</b>	<b>121189</b>	<b>44880</b>	<b>35410</b>	<b>49160</b>	<b>74999</b>	<b>89</b>

## RESOURCE OPTIMISATION

The effective use of resources can limit its unnecessary wastage. Optimal usage of the resources (such as fuels) can save the fuel and can also reduce the carbon emission due to its consumption. This technique can be effectively implemented in the 'transportation' and 'waste' sectors of the campus.

## WASTE MINIMISATION

Optimal utilization of paper and plastic stationaries can reduce the frequency of purchase of items. This can reduce the unnecessary wastage of money as well as the excess production of waste. In the case of food, proper food habits and housekeeping practices can optimize its usage.

Currently, College is taking an appreciable effort to reduce the unnecessary production of wastes. But the campus still has opportunities to reduce the generation of waste and can improve much more. Resource optimization can be effectively implemented in all type of waste generated in the campus and the campus can expect about 50% reduction the total waste produced.



## ENERGY EFFICIENCY

Energy efficiency is the practice of reducing the energy requirements while achieving the required energy output. Energy efficiency can be effectively implemented in all the sectors of the campus.

## FUELS FOR COOKING

The campus can install a solar water heater to rise the water temperature to a much higher level, then it has to consume only very less amount of thermal energy for preparing the same amount of food. This can make a positive benefit to the campus by saving money, energy and can reduce the carbon emission of the campus due to thermal energy consumed for cooking.

## TRANSPORTATION

Energy efficiency of the transportation sector is mainly depended on the fuel efficiency of the vehicles used. Here mileage of the vehicle (kmpl - Kilometres per Litre) is calculated to assess the fuel efficiency of the vehicle. Percentage of closeness is the ratio of actual mileage of the vehicle to its expected mileage. If the percentage of closeness of mileages of each vehicle is greater than that of its average, then the efficiency status of the vehicle is considered as 'Above average' and else, it is considered as 'Below average'

## Renewable Energy

Solar power plant can be installed in the campus which helps offsetting the carbon foot print. The details of these projects are given in the concerned chapters.



After analyzing the historical and measured data the following projects are proposed to make the campus carbon neutral. The projects are from energy efficiency and renewable energy. The further additions in the green cover increase will also give positive impact in the carbon mitigation.

<b>OTTOTRACTIONS- ENERGY AUDIT</b>						
<b>M.E.S Asmabi College, P.Vemballur</b>						
<b>Greenhouse Gas Mitigation through Major Energy Efficiency Projects</b>						
SI No	Projects	Energy saved(Yearly)		Sustainability (Years)	First year ton of CO2 mitigated	Expected Tons of CO2 mitigated through out life cycle
		(kWh)	MWh	Years		
1	Energy Saving in Lighting by replacing existing 18 No's T12 (55W) Lamps to 18W LED Tube	392	0.39	10	0.29	2.86
2	Energy Saving in Lighting by replacing existing 11 No's T8 (40W) Lamps to 18W LED Tube	174	0.17	10	0.13	1.27
3	Energy Saving by replacing existing 285 No's in-efficient ceiling fans with Energy Efficient Five star fans	16197	16.20	10	11.82	118.24
<b>Total</b>		<b>16763</b>	<b>17</b>	<b>10</b>	<b>12.24</b>	<b>122.37</b>

<b>OTTOTRACTIONS- ENERGY AUDIT</b>						
<b>M.E.S Asmabi College, P.Vemballur</b>						
<b>Greenhouse Gas Mitigation through Renewable Energy Projects</b>						
SI No	Projects	Energy saved(Yearly)		Sustainability (Years)	First year ton of CO2 mitigated	Expected Tons of CO2 mitigated through out life cycle
		(kWh)	MWh	Years		
1	Installation of 35kWp Solar Power Plant	47906	47.91	25	34.97	874.29

Total	47906	48	25	34.97	874
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General Environmental Awareness Questionnaire	
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
Dose Environmental Ambient Air Quality Monitoring conducted by the Institute?	No
Dose Environmental Water and Wastewater Quality monitoring conducted by the Institute?	Yes
Dose stack monitoring of DG sets conducted by the Institute?	No
Is any warning notice, letter issued by state government bodies?	No
Dose any Hazardous waste generated by the Institute? If yes explain its category and disposal method	No
Are you aware of any environmental Laws pertaining to different aspects of environmental management?	Yes
Does your institute have any rules to protect the environment? List possible rules you could include.	Yes
Does housekeeping schedule in your campus?	Yes
Are students and faculties aware of environmental cleanliness ways? If Yes Explain	Yes
Does Important Days Like World Environment Day, Earth Day, and Ozone Day etc. eminent in Campus?	Yes
Does Institute participate in National and Local Environmental Protection Movement?	Yes
Does the institute have any Recognition/certification for environment friendliness?	Yes
Does the institute use renewable energy?	Yes

Does the Institution conduct a green/environmental audit of its campus?	Yes
Has the institution been audited / accredited by any other agency such as NABL, NABET, TQPM, NAAC etc.?	Yes (NAAC)



<b>Best Practices and Initiatives</b>	
Renewable Energy	Yes
Solar Power Plant	Yes
Energy Audit and Green Audit Conducted	Yes
Biogas Plant installed	Yes
Biodiversity Conservation	Yes
Green Cover	Yes
Tree Plantation Drives	Yes
ECO clubs	Yes
Groundwater Recharge	Yes
Rain Water Harvesting System.	No
Pollution Reduction Public Transportation	Yes
E Waste Management	Yes
Connected to authorized recycler	Yes
Solid Waste Management	Yes
Lifting of garbage from the campus on alternate days by the Municipal Corporation.	Yes
Adoption of Village	Yes
CSR	Yes
Water Conservation	Yes
Energy Conservation	Yes



## RECOMMENDATIONS

1. Implement a utility monitoring program.
  - Allocate staff to carry out meter readings for electricity, waste and water on regular basis
  - Add monitoring data to spreadsheet so results can be viewed graphically
  - Compare with the utility bills meter readings in order to ensure accuracy;
2. Consider adopting and implementing a sustainable procurement policy which takes into account the whole life cycle of a product, and make sure environmental issues are written into tenders when contracting out.
3. Consider trialing recycled paper again – many recycled brands today, such as

Evolve, are just as good as virgin paper.

4. Trial the use of re-manufactured (i.e., refilled) ink and toner cartridges rather than purchasing new ones.
5. Consider producing some designated 'environmental' pages on the intranet to make it easier for staff to find environmental information. If possible, a discussion forum could be set up to allow easy internal communications and staff to make suggestions for environmental improvements.
6. Environmental training could be formalized and carried out for all staff. It does not have to be too long or onerous, providing it covers key points, particularly in relation to waste so all staff are aware of the legal requirements. At the very least, environmental information should be included in the induction pack.
7. It is strongly recommended that environmental information is also given to students and staff during induction. It is particularly important for them to be aware of what waste they can dispose of on site and where they can dispose of it, and what waste streams they must take away with them.
8. Consider implementing an environmental management system to incorporate all improvements and monitoring requirements. It does not need to be a complex system certified to any particular standard, merely a way of ensuring that baselines are set and progress is measured. Formation of Environment Policy and communicated to all faculties and other staff.
9. Plan for Zero Waste Campus Project
10. E-waste monthly inventory be maintained at campus as per E waste rules 2016.
11. A Water Meter should be installed at the institute for monitoring of water consumption per capita.
12. Increase in Environmental promotional activities for spreading awareness at campus.
13. Environment/Green committee formation for regulating eco-friendly initiatives at campus premises and periphery.





## CONCLUSION

This audit involved extensive consultation with all the campus team, interactions with key personnel on a wide range of issues related to Environmental aspects. The audit has identified several observations for making the campus premise more environmentally friendly. The recommendations are also mentioned with observations for M.E.S Asmabi College, P.Vemballur team to initiate actions.

**Carbon Foot Print 2018-21**

Sl. No.	Particulars	2018-19	tCO <sub>2</sub> e	2019-20	tCO <sub>2</sub> e	2020-21	tCO <sub>2</sub> e
1	Electricity (kWh)	126910.8	104.1	50878.0	41.7	41365.3	33.9
2	Diesel (L)	249.95	0.8	759.37	2.4	201.76	0.6
3	LPG (kg)	425.00	0.6	372.00	0.6	258.00	0.4
4	Biogas (m <sup>3</sup> )	4950	6.9	4950	6.9	4950	6.9
5	Degradable Waste in kg/yr.	8844.00	5.57	9829.60	6.19	10912.00	6.87
6	Paper Waste in kg/yr	88.44	0.05	98.30	0.06	109.12	0.06
<b>Total Carbon Foot Print tCO<sub>2</sub>e/yr</b>			<b>118.1</b>		<b>57.9</b>		<b>48.8</b>

Carbon Foot Print					
Sl. No.	Particulars	2021-22	tCO <sub>2</sub> e	2022-23	tCO <sub>2</sub> e
1	Electricity (kWh)	55470.6	45.5	81738.2	67.0
2	Diesel (L)	169.09	0.5	1170.72	3.7
3	LPG (kg)	463.00	0.7	501.00	0.8
4	Biogas (m <sup>3</sup> )	4950	6.9	4950	6.93
5	Degradable Waste in kg/yr.	11743.60	7.40	11809.60	7.44
6	Paper Waste in kg/yr	117.44	0.07	118.10	0.07
<b>Total Carbon Foot Print tCO<sub>2</sub>e/yr</b>			<b>61.12</b>		<b>86.0</b>

Net Carbon Emission after implementing Energy Efficiency projects and Renewable Energy Projects Proposed		
1	Total Carbon Foot Print tCO <sub>2</sub> e/yr	85.96
2	Carbon Sequestrated tCO <sub>2</sub> e/yr	15.20
3	Carbon mitigated by Renewable Energy tCO <sub>2</sub> e/yr (Installed)	27.88
4	Carbon mitigated by Renewable Energy tCO <sub>2</sub> e/yr (Proposed)	34.97
5	Carbon mitigated by Energy Efficiency (Proposed) tCO <sub>2</sub> e/yr	12.24
6	Effective Carbon footprint tCO <sub>2</sub> e/yr	-4.33
7	Total No of Students	2566
8	Specific Carbon Footprint kg CO <sub>2</sub> e/Student/Yr	-1.69

However, there is scope for further improvement, particularly in relation to waste minimization and energy monitoring. By implementing a basic environmental management system, current good practice can be formalized and a framework can be set up for monitoring, implementation of action plans and continual improvement.

The audit team observed that the overall site is maintained well from an environmental perspective. There are no major observations but few things are important to initiate urgently are waste management records by monthly inventory of hazardous waste, rainwater harvesting recharge; water balance cycle and periodic inspection of buildings; environment policy and initiation of composting at campus.

## References

- The Environment [Protection] Act – 1986 (Amended 1991) & Rules-1986 (Amended 2010)
- The Petroleum Act: 1934 – The Petroleum Rules: 2002
- The Central Motor Vehicle Act: 1988 (Amended 2011) and The Central Motor Vehicle Rules:1989 (Amended in 2005)
- Energy Conservation Act 2010.
- The Water [Prevention & Control Of Pollution] Act – 1974 (Amended 1988) & the Water (Prevention & Control of Pollution) Rules – 1975
- The Water [Prevention & Control Of Pollution] Cess Act-1977 (Amended 2003) and Rules- 1978
- The Air [Prevention & Control Of Pollution] Act – 1981 (Amended 1987) The Air (Prevention & Control of Pollution) Rules – 1982
- The Gas Cylinders Rules – 2016 (Replaces the Gas Cylinder Rules – 1981)
- E-waste management rules 2016
- Electrical Act 2003 (Amended 2001) / Rules 1956 (Amended 2006)
- The Hazardous Waste (Management and Handling and Trans-boundary Movement) Rules, 2008 (Amended 2016)
- The Noise Pollution Regulation & Control rules, 2000 (Amended 2010)
- The Batteries (Management and Handling) rules, 2001 (Amended 2010)
- Relevant Indian Standard Code practices





# TECHNICAL SUPPLEMENTS



**KERALA STATE ELECTRICITY BOARD LIMITED**  
**DEMAND CUM DISCONNECTION NOTICE**

(As per Regulation 122 & 123 of Kerala Electricity Supply Code 2014)

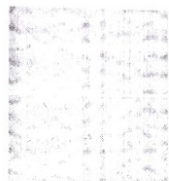
Section	[5661]-Electrical Section Mathilakom		Phone#	0480-2850155	Customer Care	1912
Consumer#	1156615000409		Reg. Mob# 808xxxx078	Regular CC Bill	KSEBL GSTIN: 32AAECK227NBZ1	
Name & Mailing Address	<p><b>PRINCIPAL</b> M E S ASMABI COLLEGE, ASMABI</p> <p><i>For redressing complaints/grievance approach the concerned CGRF</i></p> <p>South: Chairperson,CGRF(South),KSEB Ltd, Vydythi Bhavanam,Kottarakkara-691506, Ph:0474-2060220 Central: Chairperson,CGRF(Central),KSEB Ltd, Power House Building Ernakulam-682018, Ph:0484-2394288 North: Chairperson,CGRF(North),KSEB Ltd,Gandhi Road,Kozhikode-32, Ph:0495-2367820 State Electricity Ombudsman, Pallikkavil Building,Mamangalam, Edappally, Kochi-682024 Ph:0484-2346488</p>					
Bill#	5661221009449	Bill Area	M02/1	DTR	ASMABI COLLAGE EAST	
Billing Period	10/2022[Monthly]	Tariff/Phase	LT-6A/Three	Pole#	PA/108	
Bill Date	12-10-2022	Due Date	22-10-2022	DC Date	07-11-2022	
Contract Demand	(Nil) VA (75% : 0KV, 130% : 0KV)	Connected Load	65012 Watts	Security Deposit	Rs.42752.00	
Meter#	L&T020180016497006	Average consumption(Monthly)				
Meter Digits	6.2	Power Unit/Zone	CUMULATIVE			
Meter Type/Owner	NET Meter/KSEB	KWH	2840			
Last Billed Rdg. Date	Prev. Rdg. Date	Prev. Meter Rdg. Status	Prst. Rdg. Date	Prst. Meter Rdg. Status		
13-09-2022	13-09-2022	Working	12-10-2022	Working		
Power Unit	Zone	Trading	Initial Reading(IR)	Final Reading(FR)	OMF	Units*
KWH	Cumulative	Import	4972.00	5123.30	20	3026
KWH	Cumulative	Export	707.00	707.00	20	0
<b>Remarks :</b>			<b>Bill Details</b>			
Last Paid Amount - Rs.55437.00			[INR] Amount(Rs.)			
Last Payment Date - 12-10-2022			a) Fixed Charges	Fixed Charge[FC]	4620.00	
				Sub Total	4620.00	
			b) Energy Charges	Energy Charge[EC]	20122.90	
				Sub Total	20122.90	
			c) Other Charges	Electricity Duty[ED]	2012.29	
				Meter Rent[MR]	70.00	
				Sub Total	2082.29	
			d) GST	MR-CGST	6.30	
				MR-SGST	6.30	
				Sub Total	12.60	
			e) Round Off		0.21	
			f) Total Amt.(Bill#5661221009449)	(a+b+c+d+e)	26838.00	
			g) Surcharge		0.00	
			h) Reconnection Fee		0.00	
			i) Interim Bills		0.00	
			j) Arrears		0.00	
			k) Less paid/adj.		-26838.00	
			l) Less Advance		-0.00	
			<b>Net Payable(f+g+h+i+j-k-l)</b>		<b>0.00</b>	
Demand for 10/2022 is Rupees Twenty Six Thousand Eight Hundred and Thirty Eight Only						

E&OE Payment Options: Cash,Cheque,DD,MO. Online: www.kseb.in (Debit/Credit Cards,Net Banking) Other Platforms: BBPS, Friends, Akshaya, CSC,NACH

### Solar OnGrid Consumer (Generator)



1156615000409



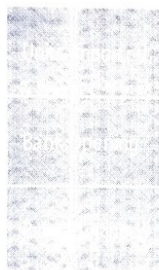
PRINCIPAL

566100009

10 KW

16-03-2018

### Bank Statement for 202210 (Generator)



3026 kWh



0 kWh

0.000

3026 kWh

0.000

SI. No.	Scientific Name	Common Name	Total Number
1.	<i>Acacia auriculiformis</i>	Acacia tree	5
2.	<i>Albizia chinensis</i>	Mottavaka	10
3.	<i>Araucaria heterophylla</i>	Norfolk island pine	2
4.	<i>Artocarpus heterophyllus</i>	Jackfruit tree	9
5.	<i>Artocarpus hirsutus</i>	Wild jack	9
6.	<i>Azadirachta indica</i>	Neem	5
7.	<i>Borassus flabellifer</i>	Palm	Many
8.	<i>Bougainvillea</i>	Paper flower	1
9.	<i>Carica papaya</i>	Papaya	2
10.	<i>Casuarina equisetifolia</i>	Horsetail tree	17
11.	<i>Chrysophyllum oliviforme</i>	Satinleaf	1
12.	<i>Cinnamomum zeylanicum</i>	Dalchini	1
13.	<i>Cycas circinalis</i>	Queen sago	2
14.	<i>Dracaena fragrans</i>	Corn palm	46
15.	<i>Falcourtia jangomas</i>	Indian plum	1
16.	<i>Ficus auriculata</i>	Fig tree	1
17.	<i>Ficus religiosa</i>	Bodhi tree	1
18.	<i>Gardenia taitensis</i>	Tiare flower	1
19.	<i>Gmelina arborea</i>	Beechwood	1
20.	<i>Hamelia patens</i>	Scarlet bush	1
21.	<i>Licuala grandis</i>	Ruffled fan palm	13
22.	<i>Mangifera indica</i>	Mango	8
23.	<i>Manikara zapota</i>	Sapota	2
24.	<i>Mimusops elengi</i>	Spanish cherry	5
25.	<i>Muntingia calabura</i>	Jamaica cherry	1
26.	<i>Murraya exotica</i>	Orange jasmine	2
27.	<i>Ochlandra travancorica</i>	Reed bamboo	Many
28.	<i>Oroxylum indicum</i>	Midnight horror	1
29.	<i>Phyllanthus emblica</i>	Indian gooseberry	1
30.	<i>Polyalthia longifolia</i>	False Ashoka	12
31.	<i>Pseuderanthemum maculatum</i>	Yellow-vein eranthemum	1
32.	<i>Psidium guajava</i>	Common guava	1
33.	<i>Roystonea regia</i>	Royal palm	2
34.	<i>Senna siamea</i>	Siamese cassia	3
35.	<i>Swietenia mahagoni</i>	Mahagony	8
36.	<i>Syzygium cumini</i>	Java plum	5
37.	<i>Syzygium jambos</i>	Rose apple	7
38.	<i>Tamarindus indica</i>	Tamarind tree	5
39.	<i>Tectona grandis</i>	Teak	1
40.	<i>Terminalia bellirica</i>	Bibhitaki	2
41.	<i>Terminalia catappa</i>	Sea almond	2
42.	<i>Santalum album</i>	White Indian sandalwood	2



**M E S ASMABI COLLEGE, P. VEMBALLUR**

**A REPORT OF 'EXPERIA' E- WASTE ERADICATION DRIVE  
in Sreenarayanapuram Grama Panchayath**

**HELD ON 28<sup>th</sup> FEBRUARY 2023**

**Programme Highlights:**

- **Date of the activity:** 28/02/2023.
- **Time:** 9.30 AM to 1.30 PM.
- **Agenda of the Programme:** Awareness Creation on E-Waste management, Collection of electronic waste for safe disposal /recycling/reuse.
- **Under the banner of:** 'Swachh Bharat', Sanitation Flagship, GoI.
- **Location of execution:** Sreenarayanapuram Grama Panchayath
- **Student Participation:** All first year and second year UG students and all PG students
- **Staff Participation:** All faculties
- **Collaboration:** i) Sreenarayanapuram Grama Panchayath (E-Waste collection).  
ii) Earth Sense Recycle Pvt. Ltd. Palakkad (E- Waste Processing).
- **Supported by:** Green Campus Initiative Group – M E S Asmabi College.

**REPORT:**

**Genesis of the drive:**

Experiential learning through active involvement in social service activities is one of the focal points of student attributes targeted by M E S Asmabi college. It is felt that social orientation is to be rejuvenated among students especially in post –covid situation.

The 'Experia' E waste collection drive was planned in a meeting of Heads of all departments convened by the Principal Dr. A Biju on 25<sup>th</sup> of February 2023. Smt. Deepa K A, (Co-ordinator, 'Swachh Bharat') and Mr. Mohammed Areej E M, (Head, NAAC Criterion 7) detailed about the modus operandi of the e-waste eradication drive to be undertaken on 28<sup>th</sup> February. It has been decided to include all students of the college (except III Yyear UG) in the drive to cover all 21 wards under Sreenarayanapuram Grama Panchayath.

For the smooth functioning of the programme, each ward is assigned to each department as follows.



**MES ASMABI COLLEGE, P VEMBALLUR**  
**“EXPERIA” E-WASTE COLLECTION CAMPAIGN**

<b>Ward no.</b>	<b>Ward Name</b>	<b>Name of Ward Member</b>	<b>Phone No.</b>	<b>Name of the organising Department</b>	<b>Collaborating Single Department</b>
1	Vekkode	Prakasini	9539406490	BCA	
2	Ayyappankavu	Jaya Sunilraj	9539597286	Botany	Dr. Jaisy David, Liji.T., Adithya
3	Pozhamkavu	Rajesh	9745616443	Physics	Dr.Ansar E.B.
4	Sreenarayanapuram	Gibimol	7034721743	Maths	Keerthana S., Dr. Sanjeevkumar
5	Panangad	Seethal	9446362959	Aquaculture	Mohammed Areej E. M, Jyothi V, Sunniya Abdu
6	Anchamparathi	Remya Pradeep	9745560806	Psychology	Dr. Sanand. C, Henna P. H, Roshna P.B.
7	Pallinada	P A Noushad	7012841055	B.Voc Fish Processing Technology	
8	Santhipuram	Jasmin Rafeeque	9567288239	B.Voc Digital Film Production	
9	Ala	Swaroop	9895097566	B.Voc Logistics Management	
10	Gothuruth	Rajan	9656219611	B.Voc Turism and Hospitality Management	
11	Vasudevavilasam	Sajitha Pradeep	9846463944	Mass Communication	Raiba P. B., Sincy Siddiq, Jahana Sirajudheen
12	Kothaparambu	Subeesh C S	9995961304	Economics	Balasubramanian U,Capt. M.B. Bindhil
13	Amandoor	Ibrahim Kutty	9745819997		
14	Puthumanaparambu	Souda nazar	9633271215	English	Dr.Sakkeena M K, Nisha M.D.
15	Pathazhakad	Sereena Sageer	9746611532		
16	Nelpini	M S Mohanan	9447352080	B.Com C A, B.Com Finance,BBA	
17	Pathiyassery	K A Ayyub	9745487976		
18	Thaniyam Bazar	Prasanna	9946362083		

		Dharman			
19	Kadappuram	Mini Pradeep	9745441397		
20	P Vemballur	Reshma Vipin	9745281402	Commerce (Aided)	
21	Asmabi College	Krishnendu	6235139740		

**Activities done:**

All faculties, all PG students and first year and second year UG students were participated in the programme. The 21 wards of Sreenarayanapuram Gramapanchayath were assigned to all 17 departments of the college.

**1. Awareness Creation:** A meeting of Haritha Karamasena members was held at 10.30 am on 27<sup>th</sup> February to give directions regarding the e-waste collection on 28/02/2023. Smt. Deepa K A (Co-ordinator, Swachh Bharath) and Sri. Mohammed Areej E M gave an introduction about the 'Experia' drive. Student Members of Harithakaramasena gave the necessary directions by visiting into all classes. Each departments were organized department level meeting on 27<sup>th</sup> February 2023 for giving directions and assigning duties to students group for the smooth conduct of the programme next day.

The soft-copy of the pamphlet set in Malayalam language describing the definition and types of e-wastes, risks associated with them and necessity of safe disposal of e-wastes were circulated to ward level WhatsApp groups. Promotion of the brochure and the pamphlet was done via other social media including Facebook. Advance information about the date and time of collection of e-waste by the students was also circulated via the pamphlet. Stress was given on the excluded materials like fluorescent tubes, CFL lamps and picture tubes of CRT televisions. Hardcopy of the awareness brochure was circulated by the students to various households during their visit for waste collection.

**2. E-Waste Collection:** One member from each student group was given the charge of leading the group. All groups were dispersed for e-waste material collection to different parts of the ward. Hard copies of awareness brochures were also carried by them for circulation. The groups were allocated with the collection works in such a way as to avoid overlapping of the areas of material gathering.

The main items gathered include LCD TVs, computer monitors, mouses, keyboards, UPS, cables, electrical switches, modems, connectors, land phones, and tabs.

Approximately 2 tons of e-waste were gathered by all the students.

The materials collected were brought to the college and kept in the side of college auditorium. All students were reached the common collection spot by 12.30 PM. After having refreshment the students came back to the college by 1.30 PM. All faculties returned to the college after despatching the collected e-wastes to the college.

**Outcome:** The message of e-waste accumulation and associated risk was passed on to the students. They were able to transmit the message to local people so as to inculcate a culture of e-waste management and safe disposal.



Awareness to Harithakarmasena members





Inauguration of e-waste collection – Smt. Jaya SunilRaj (Vice President, Sreenarayanapuram Gramapanchayath) handed over the e-waste from ward no.1 to Dr.A Biju, Principal, MES Asmabi College.

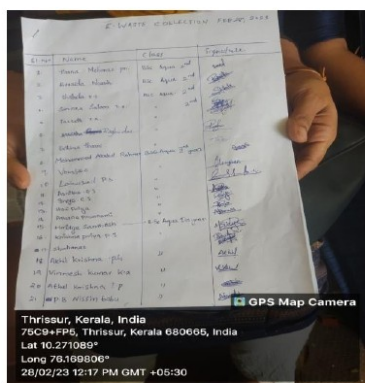


Padinjare Vemballur, Kerala, India  
749R+PJJ, Padinjare Vemballur, Kerala 680671, India  
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Long 76.142323°  
28/02/23 10:32 AM GMT +05:30

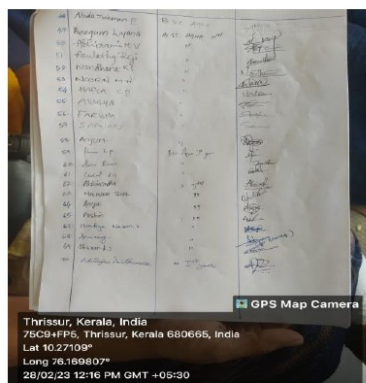


Thrissur, Kerala, India  
Panangad School, Edappally - Panvel Hwy, Panangad, Kerala 680665, India  
Lat 10.273408°  
Long 76.174374°  
28/02/23 10:29 AM GMT +05:30

Grouping of students



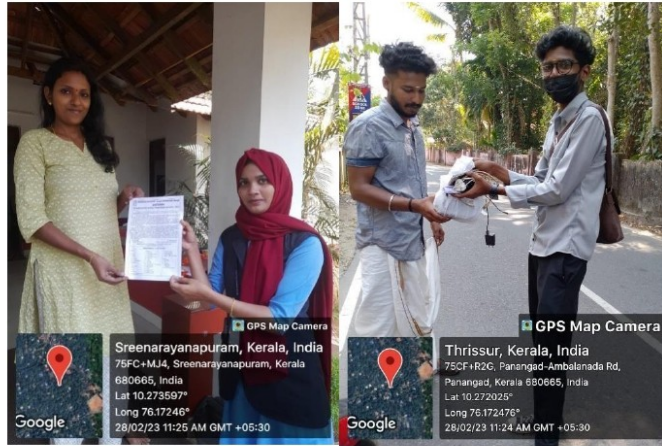
Thrissur, Kerala, India  
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Long 76.169806°  
28/02/23 12:17 PM GMT +05:30



Thrissur, Kerala, India  
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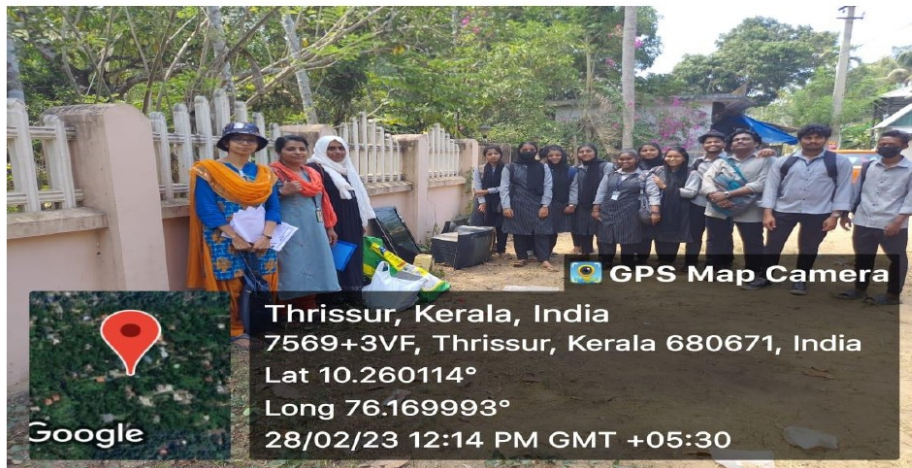


Student Attendance: Front and last pages.



Awareness brochure distribution and e-waste collection





E-waste collection by students and teachers





Deposition of Materials in the college premises.



Loading of e-waste by Earth Sense Recycle Pvt. Ltd, Palakkad

On 1<sup>st</sup> March 2023 Mr. Jinu and two staff representatives from Earth Sense Recycle Pvt. Ltd., Palakkad came to the college and loaded the materials into a container for going to recycling purpose. The collected materials weighted to 2190 Kg. An MoU with Earth Sense Recycle Pvt. Ltd. was also signed on the same date.



**MES ASMABI COLLEGE, P. VEMBALLUR**

**GREEN CAMPUS INITIATIVE**

**(2022-2023)**



### Green Campus Initiative

The Green Campus Initiative is a program that aims to promote environmental sustainability in colleges. The initiative encourages educational institutions to adopt eco-friendly practices and reduce their carbon footprint. The program focuses on various aspects of campus life, including energy consumption, waste management, transportation, and water conservation.

#### Vision

“The vision of the GCI is to campus towards a carbon-neutral, environmentally conscious institution through the volunteer efforts of staff and students. It also aims to implement green practices among students that will reduce carbon footprint and increase the use of sustainable practices.”

#### **Objectives**

- To promote sustainable and eco-friendly practices on the campus.
- To develop alternative measures to solve environmental challenges.
- To incorporate green protocol among students and faculties.
- To motivate staff, students, and teachers through environmental literacy.
- To establish an efficient way of waste management and recycling systems.
- To promote campus into a plastic-free manner.
- To prevent wasteful and unhealthy use of resources.
- To ensure waste, water and energy management.
- To decrease energy consumption to enhance energy utilization efficiency.
- To change the campus into a pollution-free and environmentally friendly manner.

### Major Green Campus Initiatives

- Green Protocol
- Solar Power Station
- Solid/Liquid Waste Management
- Separate waste Bins for Biodegradable and Non-biodegradable wastes
- Complete ban of plastics/polythene at the campus
- Use of LED bulbs
- Digital Library/ E-learning Centre
- Herbal Garden
- Institutional Planting/Awareness Campaign/Seminar/Procession/Field trips/Production and promotion of eco-friendly products
- Departmental Green Challenge

### Green Protocol

1. Bring food only as per the requirement to avoid wastage.
2. Promote ink pens to prevent the accumulation of plastic waste through discarded ballpoint pens.
3. Food and drinking water should be brought in stainless steel utensils and disposable materials should be avoided.
4. Create facilities in campus to segregate waste into bio degradable, non-bio degradable and hazardous categories.
5. Avoid paper and plastic cups and plates in public functions where food is served. Instead, use utensils that can be washed and reused.
6. Set up a compost facility to turn biodegradable waste into compost. This should be used for cultivating organic vegetables in grow bags and pots.
7. Plastic and paper should be cleaned and segregated to be handed over to scrap dealers
8. Store electrical and electronic waste and hand it over periodically to scrap dealers to ensure its proper recycling.
9. Avoid flowers draped in plastic covers and flex items during public functions in campuses and welcome dignitaries with a flower or a book
10. Training classes should be given to student coordinators and teachers in the college. Green Protocol teams should be constituted for monthly monitoring of activities.



## Solar Power Station

Solar panels were installed in the college and hostels to reduce the consumption of electricity. The solar panels will generate electricity during the day, which can be used to power the institute's various electrical appliances, including lights, fans, computers, and other equipment. Moreover, the institute's decision to phase out the use of conventional light sources will also help reduce the electricity bills. The CFL and conventional light sources consume a lot of electricity and have a shorter lifespan than LED lights. Therefore, replacing them with LED lights will not only save money but also reduce the carbon footprint of the institute.

## Solid /Liquid Waste Management

### Solid Waste

The college has taken up various initiatives to promote sustainable practices. One of the key areas of focus is solid waste recycling and biogas production. The college has set up a biogas plant on the college girls' hostel that uses organic waste from the girls' hostel kitchen to produce biogas. This not only helps in reducing the amount of waste that goes to landfills but also generates a renewable source of energy that can be used for cooking and heating purposes. Separate paper dust bins were provided in each corridor and classroom to collect waste as Biodegradable and Non- biodegradable wastes.

### Liquid Waste

The major liquid waste includes effluents from toilets and the laboratories. These are collected in the separate septic pits and allowed to settle into the soil. We are following Good Laboratory Practices to ensure the safety of the personnel. Indiscriminate use of chemicals is discouraged during practical classes and laboratory liquid chemical waste are safely disposed of.

## Complete ban of plastics/polythene at the campus

Plastic-free campus- It is a program organized in the campus that aims to reduce plastic pollution on the college campus with special focus on the reduction and elimination of plastic bottles, plastic straws and utensils, and plastic food packaging. The college organized various programs such as plastic-free campus campaign, recycling plastic campaign and awareness classes on world environment day, world ozone day etc. Instead of buying bottled water student took the initiative to buy refillable to carry around

campus and also promoted students to use paper pens.

### Herbal Garden

The herbal garden is an initiative taken by the students and staff of Botany department, MES Asmabi College to promote the use of herbal plants for medicinal purposes. The aim of the herbal garden is to create awareness among students and staff about the importance of herbal plants in our daily lives. The work on the herbal garden started on the 1st November 2022. The location chosen for the garden was an open space near the Aquaculture block.

#### Institutional Planting/ Awareness Campaign /Seminar /Procession /Field trips /Production and promotion of eco- friendly products

The Botany department, NSS and various clubs of the college have come together to promote institutional planting as a green activity on the occasion of Environmental Day. The objective of this activity is to raise awareness about the importance of planting trees and to encourage students to take an active role in environmental conservation.

The green campus volunteers in the botany department maintained indoor and corridor garden in botany department. As a part of this, a team of volunteers gave orientation to other departmental green volunteers to prepare a green corner in their departments. This is aims to that each corner of the campus fully developed as green environment.

Apart from this, awareness campaign, seminars and field trip were conducted in connection with each environmentally important day. Similarly, NSS volunteers also made eco-friendly products and sold to the staff of the college and outsiders. Eco-friendly products like paper pen, cloth bag etc. were produced and promoted through different programmes. Training programmes were also organized to train students in the production of eco-friendly products.

In addition to this, Haritha Karma Sena of the college coordinated e-waste collection from Sree Narayana Puram Gramapanchayath. The college was signed MoU with Earth Sense Recycle Pvt.Ltd. This is an important contribution to green computing.

## Departmental Green Challenge


Green campus initiative MES Asmabi College has taken up an initiative to promote sustainable practices among students and staff. As part of this initiative, it has been decided to conduct green challenge programs at the department level in February and March of this year in association with green campus initiative. Green challenge has been done well by all departments.

Green initiative program of each department based on Green challenge is added here in detail.

### PG & Research Department of English

PG & Research Department of English, MES Asmabi College organized 'LITEARTH '23' in connection with the Green Initiative Programmes on 6 March 2023. As part of the program we conducted an awareness campaign and also initiated the use of eco- friendly products in the campus. The program was inaugurated by the H.O.D cum Vice Principal Dr. Reena Mohamed and the Self-Financing Director Dr. K P Sumedhan. The department planted 5 Male stoma plants representing each class of the department in the front courtyard of the campus. We also beautified the department with some decorative plants. As to make students aware of the relevance of Green Initiative some important aspects of Green Protocols were issued in the department. Ms. Sabitha M M was the coordinator of the program.



  
**MES ASMABI COLLEGE, P. VEMBALLUR**  
**PG & RESEARCH DEPARTMENT OF ENGLISH**  
In connection with Green Initiatives  
 Presents

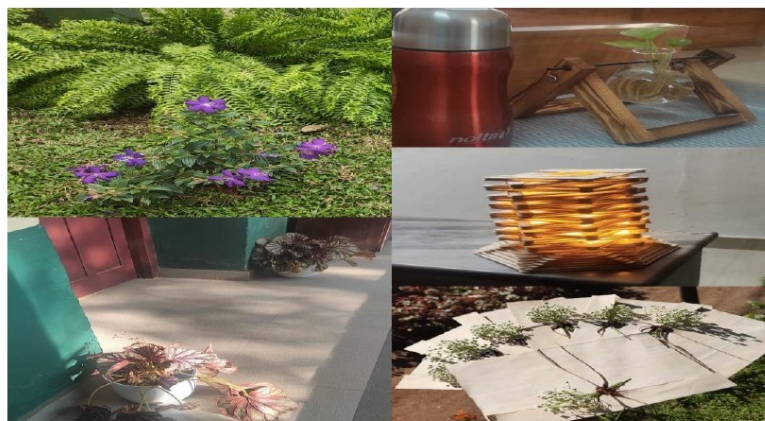
## LITEARTH '23

### "Think Green... Go Green"

Green Protocols

1. Follow the green practices to be green on the go
2. Install and encourage the use of a recycling bin.
3. Switch off the lights or power when not in use.
4. Turn off computers and other equipments when not in use.
5. Introduce compostable options to replace plastic.
6. Go paperless and be digital.
7. Pack drinks in thermos or reusable water bottle.
8. Use public transportation when possible.
9. Ride a cycle, it's a great exercise and great for the environment.
10. Plant trees together.





#### Research and PG Department of Botany

As part of Green initiative activity, Research and PG Department of Botany in association with Green Campus initiative, MES Asmabi College conducted Wetland Day Celebrations 2023 based on the theme “Ecosystem Restoration” on 02/02/2023 & 03/02/2023. The programme coordinators were Smt. Shaheedha T M and Smt. Shemi C B. It was a two days programme. First day programme was a mangrove visit to a nearby Mukundapuram on 02/02/2023. Smt. Shaheedha T M, Smt. Nazeema M K & Smt. Shemi C B assisted 60 students from II year and III-year BSc Botany for the visit. We reached there at 10.30 am. Mr. Dharmaraj, environmentalist was resource person of the programme to deliver the importance of wetlands and its conservation. The college students got great opportunity for them to learn about the importance of wetlands and their ecological significance. They also observed the unique flora and fauna that inhabit wetlands. After that, we went to Shangukulangara kavu situated near the Kodungallur. Students understood importance of sacred groves and also knew some rare medicinal plants and common tree species found in the sacred grove.

On 03/02/2023, final year B. Sc students organized wetland awareness talk for school students of Govt L P School, P. Vemballur. Mr. Mohammed Shennan and Ms. Siyana Latheef were student coordinators. Talk was conducted by Ms. Reshma P P, Ms. Hanna P and Ms. Shifana Ashraf from third year Botany. It was aimed to educate the young generation about the importance of wetlands and their role in maintaining the

ecosystem. They started their talk by explaining what wetlands are and their various types such as swamps, marshes, and bogs. They emphasized the fact that wetlands are not just stagnant water bodies but are dynamic ecosystems that support diverse flora and fauna. Then talked about the benefits of wetlands, including flood control, water purification, carbon sequestration, and habitat for various species. They also discussed the threats to wetlands, such as human activities like pollution and land-use changes, and how these activities can harm the ecosystem and engaged the students in a discussion about the ways in which they can help protect wetlands, such as reducing plastic usage, avoiding littering, and conserving water. College students also encouraged them to spread awareness among their peers and families about the importance of wetlands. The talk ended with a quiz programme handled by Ms. Reshma K. Suresh from III-year Botany. The students actively participated and answered the questions based on the presentation and winners were awarded with prize. Overall, it was a successful event.





Another programme was organized a talk on vermi composting on March 15th 2023, 10 am to 12 pm at seminar hall. During the program, Dr Girija T P addressed the gathering with a warm welcome speech. The program coordinator Dr Jisha K C introduced the resource person and the topic of discussion to the students. The Retd. Agricultural Officer Shri Thankaraj N K hosted the session and presented the topic in an exceptionally simple way to the students. Retired Agricultural Officer Shri Thankaraj described the different types of composting methods and the preparation of vermicomposting units. About 65 students participated in the programme. The session was followed by a lively discussion on the topic. Smt. Nazeema M. K. expressed her gratitude at the program's conclusion. Teachers and students visited a nearby organic farm, where the vermicomposting unit was used. Shri Thankaraj explained the methodologies practiced in the farm.



MES ASMABI COLLEGE, P. VEMBALLUR



RESEARCH & PG DEPARTMENT OF BOTANY  
IN ASSOCIATION WITH GREEN INITIATIVES  
PRESENTS

## TALK ON VERMICOMPOSTING

Shri Thankaraj N.K.  
Agricultural Officer (Rtd)

15-03-2023, TIME 10 AM, SEMINAR HALL

Principal Dr. A. Biju	HOD Dr. Girija T.P.	Co-ordinators Nazeema M.K. Dr. Jisha K.C.
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### P.G Department of Economics

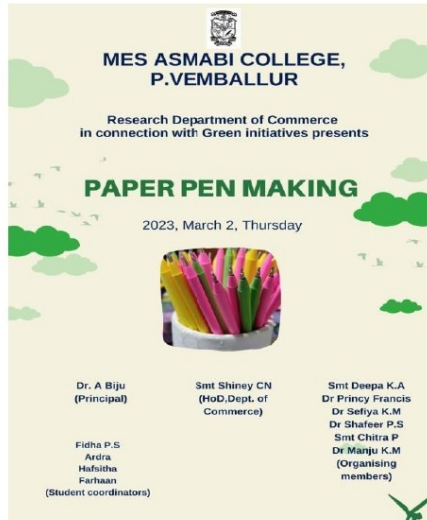
Department of Economics has distributed syngonium little star plant in to 17 departments of Asmabi College on 3rd Friday 2023. The programme were inaugurated by Dr Jeena PM, Head, department of Economics by gifting a plant to Dr. Reena Mohammed (Vice Principal) at 2.pm in the presence of all the faculties and students of economics. This programme were implemented in connection with "THANAL", designed for the objective of nurturing of nature and helping the poor people which have been practicing since the last two years by the department of economics. Students also collected fund for helping the poor and distributed it to the needy people. Dr. Jeena PM, DR. Nisar and Silpa Subramanian actively participated in the programme. The Co-ordinators were Dr. Dhanya K and Dr. Jasna NM.



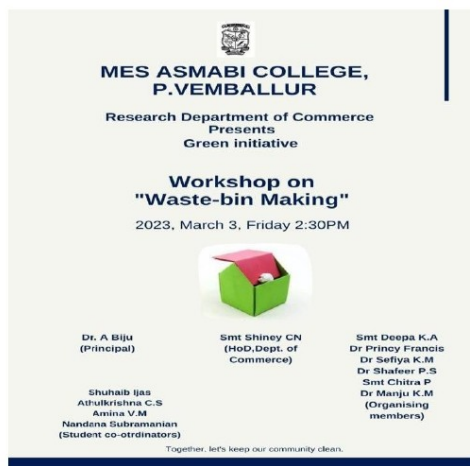
### Research and PG Department of commerce

Research Department of commerce Organized a one-day workshop on "Paper pen making" as a part of Green initiatives on 2/3/2023. Students from Second- and First-year B. Com Co- operation led the programme. They specialized in making paper pens. Each step was well explained and demonstrated using paper, refills, glue, scissors and a scale. Also, students

were taught to make pens. This made it possible to make many pens.



Second programme conducted a workshop on "waste - bin making" was conducted by Research Department of Commerce, M.E. S Asmabi college Vemballur as part of Green initiatives on 3rd March 2023 at 11.30am. The workshop was organized for B. Com co-operation students and they were actively participated in it. Mrs. Deepa K. A, Asst. professor, Research Department of Commerce was in charge of the programme, and the student coordinator Shuhaib Ijas was presented a model to the participants. After that, a discussion was carried down and the co-Ordinator clarified the doubts raised by the participants.



### Department of Physics

Department of Physics conducted green initiative activities to create a sense of environmental awareness and to promote eco-friendly behaviors and attitudes. “Echoing green” was one of the programs organized by the Department of Physics from 4-7 march 2023. The major activities included cleaning artificial pond and its nearby area in the campus and setting a garden near the department with the aim of rekindling nature connection. Under the leadership of department green initiative coordinators, students actively participated in the cleaning process. Students brought various plants and a garden was set near the department under the guidance of teachers. The program was conducted with the intention of engaging the students in hands-on activities thereby empowering them to take an active role in maintaining the campus clean and eco-friendly.

“Green Challenge” was another green activity organized as a part of green initiative which included making and selling of cloth carry bags. Students skilled in stitching with the help of YouTube tutorials prepared about 50 bags and sold them in the campus, nearby shops and houses. A logo emphasizing the significance of eco-friendly practices designed by students was printed on the bags. The program was inaugurated by Vice Principal Dr. Reena Muhammad on 6 March 2023. The activity reflects the need for switching from plastics to eco-friendly and sustainable options and conveys the idea of Reduce and Reuse.







### Department of Aquaculture

'Fish waste to fish silage' programme was held from 14/02/2023 to 06/03/2023 by Department of Aquaculture as a part of 'Green campus initiatives'. Final year students were the student coordinators for the programme. The programme was divided into two parts -1) silage making from fish waste and 2) use of silage as garden supplement. The inaugural session was done by Head of the department, Dr. K. Kesavan, where he initiated the silage making process along with the student volunteers. Shri Shibu A Nair felicitated and Dr. Dhanya P.R. conveyed the vote of thanks during the inaugural session.

There were four student coordinators for the programme: Anupam Pranay D, Hayfa P, Jeeshma E.S. and Vijisha Thoppil. Fish wastes for making the silage were collected from Chettuva matsya bendhana thurumugam, Chavakkad, Kerala. Collected wastes were washed thoroughly in potable water. The wastes were then chopped well and were transferred to a plastic bucket for making fish silage. Fish silage is the product of autolysis of fish or fish by products. At an acid pH, enzymes in fish degrade and liquefy the fish tissues, while bacterial spoilage is minimized by the added acid. Fish silage is prepared either by acid fermentation (acid silage) or anaerobic microbial fermentation (fermented silage).

The raw material was first minced; suitably small particles was obtained by using a mortar and pestle. Immediately after mincing, 3-5 per cent by weight of 85 per cent formic acid is added, that is 35 kg or about 30 litres of acid to one tonne of fish. It was mixed thoroughly so that all the fish comes into contact with acid, because pockets of untreated material will putrefy. The acidity of the mixture must be pH 4 or lower to prevent bacterial action. After the initial mixing, the silage process starts to occur naturally but occasional stirring help to ensure uniformity.

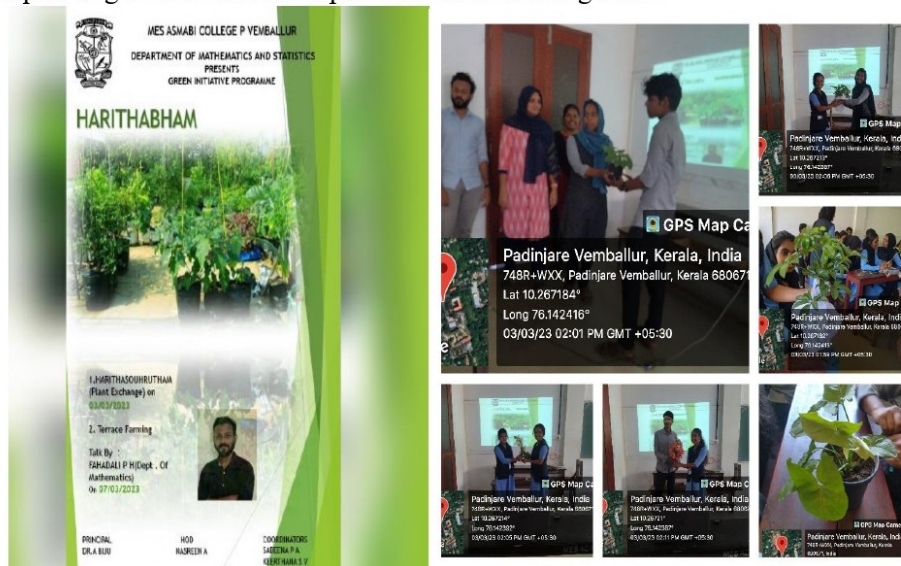
The silage was used as a fertilizer since it is a good source of Nitrogen (from the protein), Phosphorus, Potassium, Calcium, and Magnesium (particularly from the bone structure) and most trace elements needed for plants. The application of fish silage as a fertilizer can be done as part of the irrigation process by directly adding around 2-5 % liquid silage to the irrigation water.

Fish silage is a cheap and environment friendly alternative method for waste-fish utilization and prevents dumping it in the environment which leads to pollution in many coastal fishing communities. It is also a better and cheap alternative to be added in animal feed as a good protein supplement.



Dept. of Mathematics & Statistics

Dept. of Mathematics & Statistics jointly organized 'Harithabham'. Harithasouhrutham was conducted on 3rd March 2023, in which Dept. of Mathematics HOD- Nasreen A, other faculties of the department Fahadali P H, Sabeena P A & Dept. of Statistics HOD- Keerthana S V and 40 students from 1st & 2nd year BSc Mathematics participated & exchanged plants among themselves as a part of green initiative and planted in their home garden.



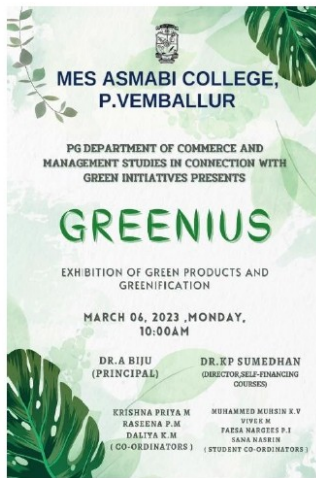
A talk on Terrace Farming by Fahadali P H, Faculty in dept. of Mathematics, MES Asmabi College, P Vemballur was conducted on 7th March 2023, in which department faculties Sabeena P A, Keerthana S V & 21 students from 2nd year BSc Mathematics participated. The resource person presented a PPT on the topic and explained various methods of terrace farming and shared his experience and some photos of his own vegetable garden on terrace. The class was very much effective and students were motivated to make a vegetable garden of their own at home.



#### PG Department of Commerce and Management studies

On 6<sup>th</sup> March 2023 PG Department of Commerce and Management studies held an exhibition of green products and sold plants among students and faculties of our college as a part of green Initiatives. Plants are also planted and beautified in front of the commerce classes. The main agenda is to create responsibility among the minds of students regarding how to recycle waste materials and to protect environment. And create an awareness among them regarding the importance of indoor plants. Total 15 faculties and 415 students were participated in this program. Dr. Reena Mohamed Vice Principal, inaugurated the exhibition and Dr.KP Sumedhan delivered a talk on significance green initiative.





### Department of Computer Application

As part of the Green Activity, Department of Computer Application in association with the Green Campus initiative, MES Asmabi College, P. Vemballur conducted a program namely "Thanal" Plant Distribution to Students on 1/03/2023 at 2: 30pm and a presentation on E -Waste Recycling Methods on 1/03/2023 at 3: 30pm. The program coordinator was Nasiya P M Assistant Professor, Department of Computer Application. Plant Distribution student coordinators were Junaid Gafoor (II yr BCA), Namsad (II yr BCA) and Anushya (II yr BCA). Student coordinators of second programme were Junaid Gafoor (II yr BCA), Namsad (II yr BCA) and Yasin (I yr BCA).

Fruit plants were distributed among the students by the HOD Smt. Jabin T H, Assistant Professor, Department of Computer Application and Program Coordinator Smt. Nasiya P M, Assistant Professor, Department of Computer Application. Plants of Rose apple, Chikoo and Rambutan were distributed. Plants were distributed by giving them instructions how to take care of them. Finally, the program ended with a vote of thanks by the coordinator Smt.Nasiya P M.



The topic e-waste recycling methods was presented by Anushya of 2nd BCA. Through the presentation the students discussed about many ways of recycling e-waste. They discussed about different types of e-waste, how they were a threat to the environment and what are the preventive measures the society



must do to safeguard our environment from these harmful wastes. Students were very much interactive. program ended with a vote of thanks by the coordinator Nasiya P M. Students coordinated really well throughout the whole program. Overall it was a successful event.

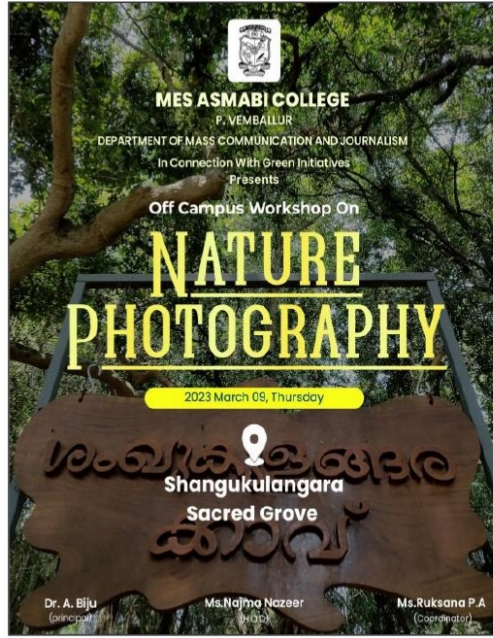


Department of Mass communication & Journalism

The department organized the movie screening activity in connection with college green initiatives on 2<sup>nd</sup> March 2023. Two short films, ‘Voice of Trees’ & ‘And I Call Him My Father’ were screened. Both the films show how a common man started planting trees in a piece of barren land and turned it into a forest.



The department organized a one more programme -one day workshop on Nature Photography on 9th March 2023. It was an off-campus workshop conducted at Shangukulangara Sacred Grove. It helped the students know more about sacred groves and need to protect it.



### Department of Malayalam

As part of green initiative activity, Department of Malayalam in association with political science organized a nature walk 'Kaavettam' to sacred grove named Shankulangara kaavu on 10-3-2023. An awareness class was conducted by Dr. K H Amitha Bachan (Assistant Professor in Botany& Director of WGHF) at the sacred grove and he explained the importance of sacred groves in the current scenario. Dr. Sanand Sadanand and Dr. Jaisy David delivered speech. Total of 45 students participated in the programme.





Department of Fish Processing Technology

The Department of Fish Processing Technology conducted two programmes “Green Challenge” and “Keep it Green”. “Green Challenge” included 3 activities- (Training on Paper bag making, Competition – Anything Green and Hanging 25 water feeder for birds. “Keep it Green”- Setting up a green corner near to the department.

“Keep it Green”-The works started on 14th February, 2023 with the help of all the students. With the support of teachers and students, the garden is extending with ornamental plants, medicinal plants and vegetables. With very much interest all the students are participating in bringing the plants and maintaining the garden.





Green Challenge - Water feeder for Birds conducted on 24-02-2023. Water feeders are made out of ecofriendly materials - coconut shell and ropes- were hanged on different places in the campus to protect the birds. Coordinators will take the responsibility to change the water every Friday to make sure the water quality and to avoid the multiplication of mosquitoes.



A training on paper bag making arranged in the department on 03-03-2023, Friday at 2.00 to 3.30 pm. The programme was very successful with the participation of the department teachers and 60 students from different stream. Second year student Amithraj K.R. (who is expert in paper bag making, doing business in the field) led the training. Materials provided for the training. Very good responses obtained from the participants. First product from the training was handed over to Dr. Reena Mohammed, Vice Principal of the College.

**MES ASMABI COLLEGE**  
 DEPARTMENT OF FISH PROCESSING TECHNOLOGY  
 as part of  
**GREEN CAMPUS INITIATIVE**  
 Organises Training on  
**PAPER BAG MAKING**

**Date:** 03/03/2023, Friday  
**Venue:** Room No: 404, Aquaculture Block  
**Time:** 2 pm

**REQUIRED MATERIALS WILL BE PROVIDED**

Dr. A. Biju (Principal)  
 Dr. Sayana K. A. (HOD)  
 Ujjwala Nair (Staff co-ordinator)  
 Abhishek P. M. (Staff co-ordinator)

For more details contact:  
 9447530069  
 8594076656



Another programme was a contest “Trash to Treasure” aiming to extract innovative ideas to reuse the waste materials. Students from other departments also participated in the programme. 24 students are participated in the programme. Many ideas derived from the waste card boards, bottles, paper, coconut shell etc. Distributed the prize for the first position and participation.



### Department of Tourism & Hospitality Management

Department of Tourism & Hospitality Management organized green initiative activities “Tresnaturalle”. “Tresnaturalle” conducted on 6th march 2023. It is a craft making competition based on the theme “Reduce-Reuse-Recycle”. Under the leadership of department green initiative coordinators, students actively participated in the competition. Students brought various waste materials which is reusable and converted it into beautiful craft items. The program was conducted with the intention of engaging the students in hands-on activities thereby empowering them to take an active role in maintaining the campus and nearby areas clean and eco-friendly.





“Go Green” was another orientation program organized as a part of green initiative. The main aim is to give awareness to the students about the importance of protecting our environment with special reference to tourism industry. The awareness program was taken by Head of the department Mr. Pranav P Kumar on 10th March 2023. Mostly all the students participated in the program. The program created a sense of environmental awareness and to promote eco-friendly behaviors and attitudes among students.



### Department of B.voc Logistics Management

Department of B.voc Logistics Management Green quiz on 03/03/2023. The programme co-ordinators were Anjana T T, Sruthy Dinesh &

Mamatha Thilak. 20 students participated in this competition. Competition contained 2 phase, those who qualified in 1st phase will get chance to participate the next phase. The students actively participated in the competition and gifted vegetables seeds to winners. It helps one gain a broad or specialized understanding of a subject. Quizzes are intended to encourage fun learning methods while also enhancing general knowledge. Students can "think outside the box" or from diverse perspectives by participating in quiz tournaments. Overall, it was a successful event.



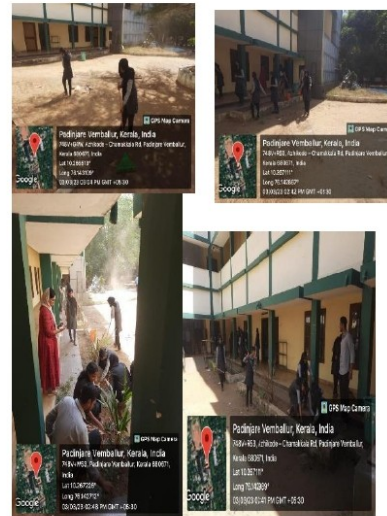
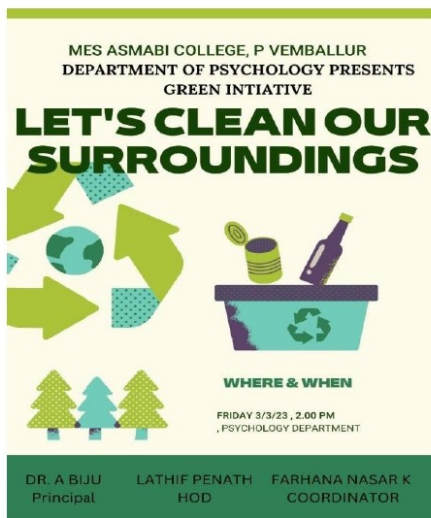
### Department of Psychology

Department of Psychology organized two events. First event was “Debate on the topic Environmental Implications due to fast fashion industry” on 3-3-2023 held at Psychology Lab. Mrs. Farhana Nasar, Assistant Professor had informed all the instructions and rules of debate and importance of topic. Programme was conducted around 2.00 pm. After dividing the groups and giving the instructions, the debate was started. Seven groups with 10 students were formed and all the groups dispersed to various sides of the classroom. There were mainly two ideas which are supporting the topic and students who opposing the topic. Several opinions were created. The Debate was completed by 2.45 pm.





The second programme was “LETS CLEAN OUR SURROUNDINGS”. Programme was conducted around 3.00 pm at the same day. After dividing the groups and giving the instructions, the cleaning was started. Front area of department was cleaned and gardening area also cleaned, so many plastic wastes were collected and segregated.



Department of B.Voc Digital Film Production

In connection with green initiative program “GREEN VENTURE” organised by B.Voc Digital Film Production. The HOD of B.Voc digital film production Mr. Mynag Suresh and staff members Amarjith and Rasidha coordinated the function. The Green venture program conducted on 09/03/2023 at 01:30 PM. The program mainly focused on hand made bamboo planter. The benefits of Bamboo pots are Bamboo is resistant to rot and decay, Bamboo is lightweight, Bamboo has a natural UV coating, Bamboo pots have excellent

drainage and Bamboo pots are eco-friendly. Students collect a bamboo and cut the bamboo into small pieces. Then covered with bamboo rope and half filled with soil. Indoor plants like money plant, lucky bamboo and peace lily were planted in handmade bamboo planters and distributed to offices and departments. The Green Venture Program ended at 04:00 PM.






# Certificate



*This is to certify that **MES Asmabi College, P.Vemballur, Kodungallur, Thrissur, Kerala** is now a **Recognized Social Entrepreneurship, Swachhta & Rural Engagement Cell (SES REC) Institution**. The Institution has successfully framed the SES REC Action Plan and constituted ten working groups for improving facilities in the Campus and the Community/Adopted Villages in the areas of **Sanitation & Hygiene, Waste Management, Water Management, Energy Conservation and Greenery** post COVID-19, along with the observation of three environment, entrepreneurship and community engagement related days to inculcate in faculty, students and community, the practices of **Mentoring, Social Responsibility, Swachhta and Care for Environment and Resources**.*

Date of Issue:  
1/10/2020

  
Dr. W G Prasanna Kumar  
Chairman

Mahatma Gandhi National Council of Rural Education  
Department of Higher Education, Ministry of Education  
Government of India

Certificate No.: MoE/SES REC/KE/THS/N513