SAKSHI CONSULTANTS

Consulting Engineer

R.C.C. Designer

Approved Valuer

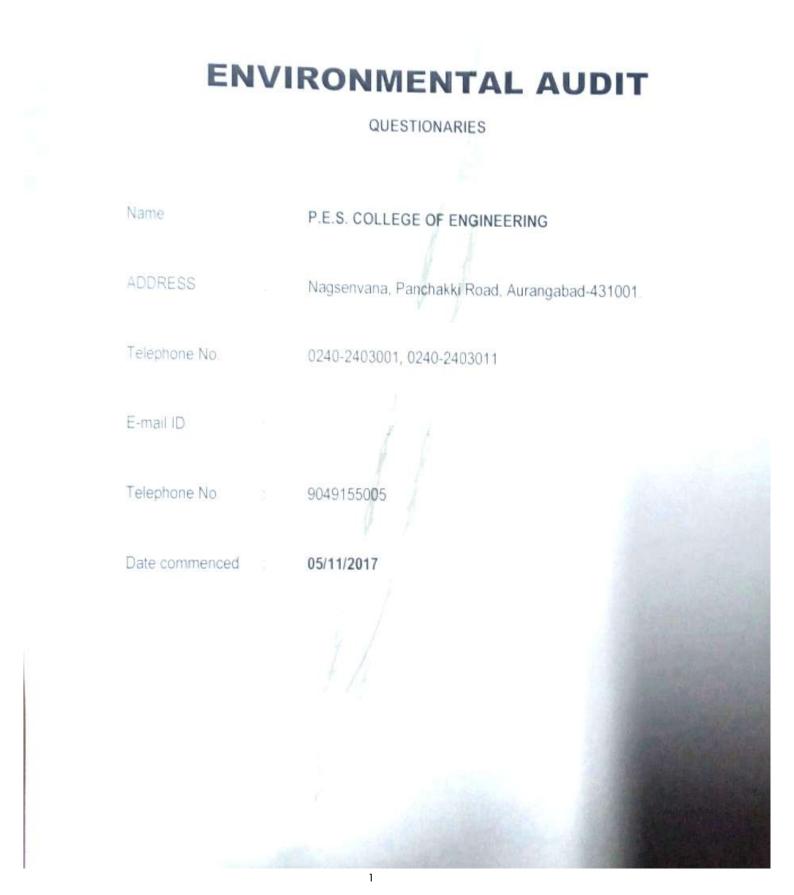
Deepak N. Kakade

H.E. (Civid), M.E. (Structure) A.M.LE., A.LV

Date 05/11/2017

Off 7, Ashok Nagar, Laxmi Colony, Cantt Autaogabad (M.S.) Ph. (0240) 2370472 (0240) 3121194

Ret



Put , mark in appropriate box

What is the total strength of student and teachers in your College? (Approx.)

1	Vo. Of Student	No Of Teacher
1 UG Engineering	1590	94
2. PG Engineering	110	09
3 MBA	NA	NA
TOTAL	1700	103

Which of the following are available in your College?

1 Garden area with Lawn	
2 Play Ground	N.
3 Kitchen	
4 Tollets (Number)	v. 14
5 Garbage dumps (Number)	. 12
6 Laboratory	v .60
7 Canteen	
8. Other (Specify)	
(Rain water Harvesting, Underground	

percolation tank, Farm pond, Raw water

 Which of the following are found near your College?

Mark the level of disturbance it create for the College in a scale of 1 to 9

1. Municipal dump yard	0.0
2. Garbage head	
3 Public convenience	01
4 Sewerline	01
5 Stagnant Water	00
6 Open drainage (River)	01
7. Industry – (Sugar Industry)	00
8 Bus/Railway Station	00
9. Market/Shopping complex/Public halls	00



I-WASTE

- 1 Does your College generate any waste ? If so, what are they ? Yes Garden waste Papers, box Plastic Keyboared, Drumbs etc
 - 2 What is the approximate amount of waste generated per day ?

(In Kilograms) (Approx)

Approx	Bio degradable	Non-Bio degradable	Hazardous	Others
1 kg.				
2-10 kg	Yes V	Yes v		Yes√

3 How is the waste generated in the College managed? By

(Biological Hazardous waste)

		Yes	No.	How
1.	Composting	2'		Composting
2	Recycling	4		Giving for recycling
3	5.5 19	N)		Paper print both side
4.	Other (specify)			Given to pig farm
	Food waste from Mess			

4

HAZARDOUS MATERIAL

No any Hazardous material generated in chemistry lab and Civil Engineering labs.

 How many separate boxes do you think you would need to put a class room laboratory To start a waste segregation and recycling Campaign.

		No Ne	eed
5	Do you use recycled paper in College ?	Yes 🗸	No
6	How would you spread the message of recy	cling to other in the	e community ?
	Have you taken any initiatives ? If yes, pleas	e specify	Yesv

A survey was carried by Civil department Government College and the DTE has given Instructions accordingly. We are following the necessary guidelines and they have been Circulated to all the department in 2015.

7. Can achieve zero garbage in your College ? If yes, how ?

Yes √ No

Aurangabad corporation has appointed a private agency (M/S Reddy) to collect the garbages from campus at regular interval.

II - GREENING THE CAMPUS

8.	is ther	e a garden in your College	Yes	No
		ident spend time in the garden ?	Yes	No
		e plants with approx, numbers of each spec	es	
		imbers of plants in campus is approx 2.491		
9	Sugge	est plants for your campus (Trees, vegetable	es herbs etc.)	
	Trees	, Herbs		
10.	List th	ne species planted by the students with num	bers	
	1.	Bottle Palm		120
	2.	Neem		15
	3.	Coconut		02
	4	Umber		01
	5.	Gulmohar and similar species		05
	6.	Rubber (small leaf)		40
	7.	Pipal		06
	8.	Morpankhi		15
	9.	Babul		20
	10.	Rose		30
	11.	Badam		03
	12.	Ashoka		10
	13.	Mango		105
	14.	Assorted plants		40
	15	Guava		375
	16	Dense forest		1200
	17.	Lawns		01 acre

III - ENERGY

- 11 List ten ways that you use energy in your College
 - 1 Light & Fans
 - 2 Heating Refrigeration & Air conditioning system
 - 3 Internet & Computer
 - 4 Practical equipments
 - 5 Pumping

(Electricity, Diesel Generators, LPG, Solar, Biogas)

Using this list try to think of ways that you could use less energy every day.

Sr No	Energy	Reduction of usage
1.	Electricity	10 ***
2.	Generator	20 ° •
3.	LPG	00 %
4	Solar	20 °o

12 Are there energy saving methods employed in your College ?

If yes, please specify.

Yes v No

CFL Lamps are installed in the College (Provision of CFL/LED Lamps wherever

Possible)

Solar Water heaters are used in hostel

Optimum use of electrical equipment

LCD monitors are used in computer labs

13 How much money does your College spend on energy such as electricity, gas, firewood etc. in a month record it

NA

14 How many CFL* bulbs has your College installed ?

If none, why not ?

Electronic tubes are also installed in Collee Campus

- Are any alternative energy sources employed/installed in your College ?
 Yes√ No
 (Photovoltaic cells for solar energy, energy efficient stoves, etc) Specify Solar collecting panels are installed for water heating in the hostels.
 - 16. Do you run "switch off" drills at College ? Yes No
 Boards are displayed in each lab and class room as "Switch of light and fan when You leave."
 Auto switches with illumination intensity sensors are installed in the main building for Overnight illumination.
 - Are your computers and other equipment put on power saving mode ?
 Yes√ No
 - Does your machinery (TV, AC, Computer, weighing balance printers etc) run on standby Modes most of the time ?
 If yes, how many hours ?
 Yes√
 No 02 Hours



IV – WATER CONSERVATION List four uses of water in your College 1. Drinking 2 Washrooms 3. Laboratories 4. Gardening How does your College store water ? Are there any water saving Techniques followed in your College ? Yesv No What are they ? College having underground and overhead tanks with cover ? Yes Nov If there is water wastage, specify why ? 21. How can the wastage be prevented / stopped ? It is prevented by using push back taps and flushes. Wastage from the RO filters is collected in open tank and used for garden. Locate the point of entry of water and point of exit of waste water in your College. 22 Entry - AMC water supply, Bore well and open well. Drainage Exit - Where does your water come from ? (source) Water comes from Jayakwadi reservoir, open well and Bore well in the campus. Where does the waste water go ? All waste water is collected through underground sewers and disposed to outside drainage.

- Write down four ways that could reduce the amount of water used in your Institute.
 - 1. By using push cock system.
 - 2. Avoid evaporation of water.
 - 3. Provided glass for drinking purpose.
 - 4. By making awareness in students to save the water.
 - 24. Record water used from the College water meter for six months (Record at the same time of each day). At the end of the period, compile a table to show how many liters of water have been used.

Week	Water for toilet (Ltr)	Water for drinking (Ltr)	Water for gardening (Ltr)	Water for laboratory
1	12000	50000	15000	500
2	12010	49998	15007	498
2		50005	12010	504
3	12005	50010	15015	515
4	12015	50010	10010	

25	Does your Institution harvest rain water?	Yes v	No
			02
	If yes, how many rain water harvesting units are there?		01



V - ANIMAL WALFARE

26 List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds insects etc)

Dogs	-	04
Cats	-	03
Squirrels	-	05

Birds of various species - Ample.

27. How many dogs in your area have undergone Animal Birth Control Anti Rabis (ABC-AR) ? AMC carries out this regular activity.

How many need ABC - AR ? AMC carries out this regular activity.

- 28. Which is the animal welfare organization nearest to your College ?
 Does it have an ambulance service ?
 Yes No√
- 29. Is there any incidence of animals getting wounded/affected due to unfavourable conditions existing in your College on nearby (like a dog getting wounded, poisoning of animals, improper caging of animals, hunting of animals etc)

Yes Nov

What did you / your College / neighbour do?

Nil

VI - GENERAL

- Are you aware of any environment laws pertaining to different aspects of environmental Management? Yes√ No
- 31. Does your College have any rules to protect the environment?

Yes No No

List possible rules you could include.

- Building is planned to have natural illumination and good air cross ventilation.
- Plant more trees and educate others about the positive aspects of it.
- Choose fuel efficient travel options, travel less and try to pick more direct routes to save on fuel.
- Use less Fossil Fuel Based Products.
- Conserve Water.
- Reduce use of harmful chemicals.
- Animal should not be injured or killed.
- Having identifies parking near the entry and exit gates.

ACTION PLAN

- Conveniently co-locate recycling and trash bins to improve convenience and reduce cross contamination.
- · E-Waste Bins are placed in College Campus.
- · Start a composting pilot project.
- To take the Solar energy power generation initiative to the next level. Planned to establish solar energy park and workshops related to renewable energy are conducted during academic to create awareness among the students.

CONCLUSIONS

It is that the College performs fairly well on sustainability issues. The College does consider the environmental impacts of most of its actions and makes concerted efforts to act in an environmentally responsible manner. In conversations with faculty, staff and administration of the College major improvements were made over the last ten years.

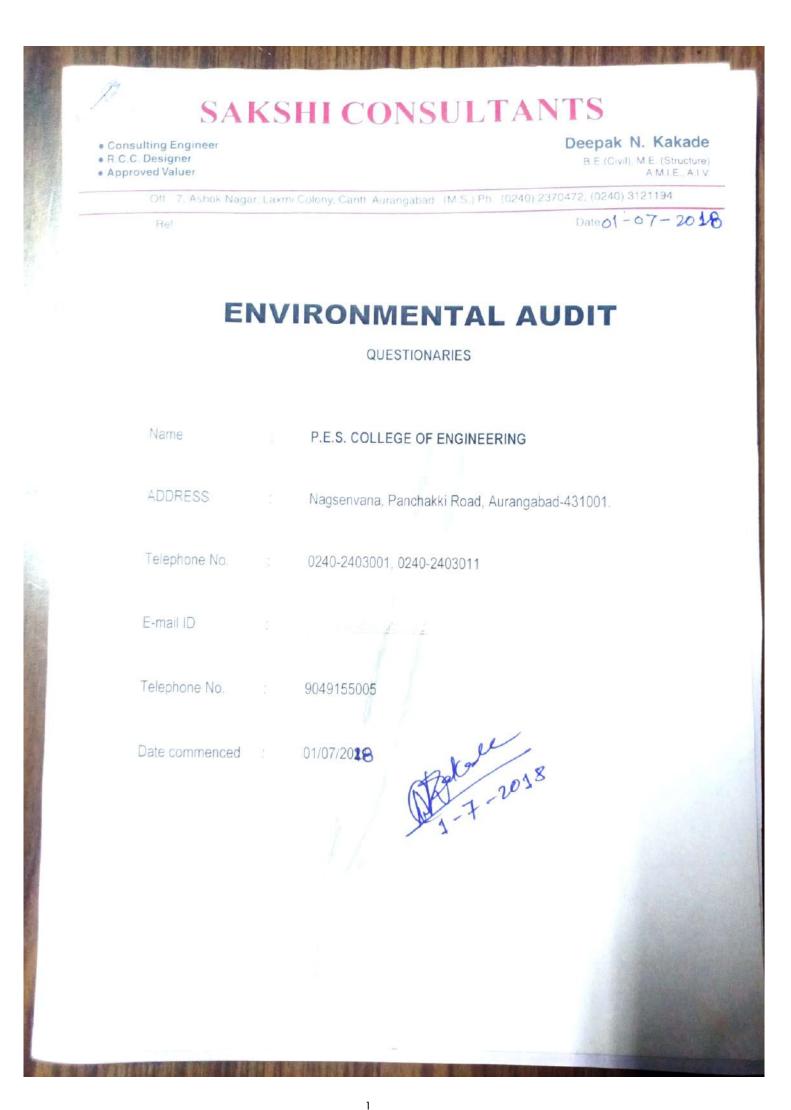
The main recommendations are:

- Improve the College's monitoring and reporting of water and energy usage and provide better feedback and information to campus users.
- To continue working towards composting the post-consumer food waste generated by the dining halls.

. Déepak N. Kakade Aurangabad.

DR. DEEPAK N. KAKADE M.E. PH.D. (Civil Strcture) M.I.E.

Reg. No. 255/97 P. No.7, Ashoknagar, Laxmi Colony, Aurangabad - 431 002 (M.S.) C + 91-9049155005 O+91 8459736033 E- Deepak.kak05@gmail.com



Put √ mark in appropriate box

What is the total strength of student and teachers in your College? (Approx.)

	No. Of Student	No Of Teacher
1. UG Engineering	1380	93
2. PG Engineering	108	09
3. MBA	NA	NA
TOTAL	1488	102

Which of the following are available in your College?

1. Garden area with Lawn	V
2. Play Ground	V
3. Kitchen	√04
4. Toilets (Number)	√14
5. Garbage dumps (Number)	√12
6 Laboratory	√60
7. Canteen	√01
8. Other (Specify)	
(Rain water Harvesting, Underground	
percolation tank, Farm pond, Raw water	

storage pond) ...√..02

Which of the following are found near your College? Mark the level of disturbance it create for the College in a scale of 1 to 9

1. Municipal dump yard	00
2. Garbage head	01
3 Public convenience	00
4 Sewerline	01
5. Stagnant Water	00
6. Open drainage (River)	01
7. Industry – (Sugar Industry)	00
8. Bus/Railway Station	00
9. Market/Shopping complex/Public halls	00



I-WASTE

Does your College generate any waste ?
 If so, what are they ? Yes
 Garden waste
 Papers, box
 Plastic
 Keyboared, Drumbs etc.

 What is the approximate amount of waste generated per day ? (In Kilograms) (Approx)

Approx	Bio degradable	Non-Bio degradable	Hazardous	Others
1 kg.				,
2-10 kg.	Yes V			
10 kg.		Yes V		Yesv

3. How is the waste generated in the College managed? By

(Biological Hazardous waste)

		Yes	No.	How
1.	Composting	V		Composting
2.	Recycling	\checkmark		Giving for recycling
3	Reusing	V		Paper print both side
4	Other (specify)			Given to pig farm
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HAZARDOUS MATERIAL

No any Hazardous material generated in chemistry lab and Civil Engineering labs.

How many separate boxes do you think you would need to put a class room laboratory
 To start a waste segregation and recycling Campaign.

		No Ne	ed
5.	Do you use recycled paper in College ?	Yes 🗸	No
6	How would you spread the message of recy	cling to other in the	community ?
	Have you taken any initiatives? If yes, please	e specify	Yes√

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Yes

Nov

Aurangabad corporation has appointed a private agency (M/S Reddy) to collect the garbages from campus at regular interval.

II - GREENING THE CAMPUS

8	Is the	ere a garden in your College	Yes √	No
	Do st	tudent spend time in the garden ?	Yes 🗸	No
	List t	he plants with approx. numbers of each s	pecies	
		lumbers of plants in campus is approx. 2.		
9	Sugg	est plants for your campus. (Trees, vege	tables, herbs etc.)	
	Tree	s. Herbs		
10.	List t	he species planted by the students with n	umbers	
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	17.	Lawns		01 ac

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III - ENERGY

- List ten ways that you use energy in your College.
 - 1. Light & Fans
 - 2. Heating Refrigeration & Air conditioning system
 - 3. Internet & Computer
 - 4. Practical equipments
 - 5. Pumping

(Electricity, Diesel Generators, LPG, Solar, Biogas).

Using this list try to think of ways that you could use less energy every day.

Sr. No.	Energy	Reduction of usage
1.	Electricity	10 %
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12. Are there energy saving methods employed in your College ?

If yes, please specify.

Yes √ No

CFL Lamps are installed in the College (Provision of CFL/LED Lamps wherever

Possible)

Solar Water heaters are used in hostel

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14. How many CFL* bulbs has your College installed ? 100 If none, why not ?

Electronic tubes are also installed in Collee Campus

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- Where does your water come from ? (source)
 Water comes from
 Jayakwadi reservoir, open well and Bore well in the campus.
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All waste water is collected through underground sewers and disposed to outside drainage.

- 23. Write down four ways that could reduce the amount of water used in your Institute.
 - 1. By using push cock system.
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25.	Does your Institution harvest rain water ?	Yes \checkmark	No
	If yes, how many rain water harvesting units are there ?		02



V - ANIMAL WALFARE

26 List the animals (wild and domestic) found on the campus (dogs. cats, squirrels, birds insects etc)

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Cats	3	02	
Squirrels	-	10	
Birds of vari	ous s	oecies – Am	ole.

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VI - GENERAL

30. Are you aware of any environment laws pertaining to different aspects of environmental Management?

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ACTION PLAN

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Ret

Date 10-9-2019

ENVIRONMENTAL AUDIT

QUESTIONARIES

Name P.E.S. COLLEGE OF ENGINEERING

ADDRESS Nagsenvana, Panchakki Road, Aurangabad-431001.

1

Telephone No. : 0240-2403001, 0240-2403011

E-mail ID

Telephone No. : 9049155005

Date commenced : 10/09/2019

Put v mark in appropriate box

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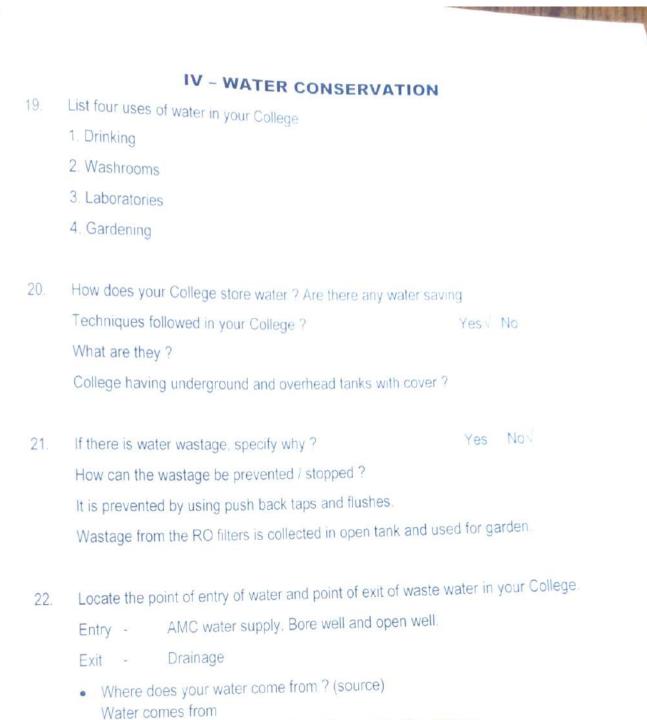
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Modes most of the time ? If yes, how many hours ? Yes No 02 Hours





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20.			02
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Yes Nov Nil What did you / your College / neighbour do ?





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Yes V No

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The main recommendations are

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Kode 2019 r. Deepak N. Kakade Aurangabad.

DR. DEEPAK N. KAKADE M.E. PH.D. (Civil Strcture) M.I.E Reg. No. 255/97 P. No.7, Ashoknagar, Laxmi Colony, Aurangabad - 431 002 (M.S.) C + 91-9049155005 O+91 8459736033 E- Deepak.kak05@gmail.com

SAKSHI CONSULTANTS

Consulting Engineer

• R.C.C. Designer

Approved Valuer

Deepak N. Kakade

B.E.(Civil), M.E. (Structure) A.M.I.E., A.I.V.

Off. : 7, Ashok Nagar, Laxmi Colony, Cantt. Aurangabad. (M.S.) Ph.: (0240) 2370472, (0240) 3121194

Ref:

Date :

ENVIRONMENTAL AUDIT

QUESTIONARIES

;	P.E.S. COLLEGE OF ENGINEERING
	Nagsenvana, Panchakki Road, Aurangabad-431001.
	0240-2403001, 0240-2403011
	principal@pescoe.ac.in
ator :	Prof. Dr. Deepak N. Kakade
;	9049155005
2 5	04/10/2020
	: ator :

Put $\sqrt{}$ mark in appropriate box

What is the total strength of student and teachers in your College ? (Approx)

TEACHER	NO. OF STUDENT	NO OF
1. UG Engineering	1800	120
2. PG Engineering	108	09
3. MBA	NA	NA
TOTAL	1908	129

Which of the following are available in your College?

1. Garden area with Lawn	\checkmark
2. Play Ground	\checkmark
3. Kitchen	…√04
4. Toilets (Number)	√14
5. Garbage dumps (Number)	√12
6. Laboratory	√60
7. Canteen	√01
8. Other (Specify)	
(Rain water Harvesting,	√02

Underground percolation tank, Farm pond, Raw water storage pond)

111.111.11

Which of the following are found near your College?

Mark the level of disturbance it create for the College in a scale of 1 to 9

1. Municipal dump yard	00
2. Garbage head	01
3. Public convenience	00
4. Sewer line	00
5. Stagnant Water	00
6. Open drainage (River)	01
7. Industry – (Sugar Industry)	02
8. Bus/Railway Station	00
9. Market/Shopping complex/Public halls	00

I-WASTE

Does your College generate any waste ? 1.

If so, what are they ?

Garden waste,

Papers, box

Plastic

Keyboared, Drumbs etc.

2. What is the approximate amount of waste generated per day ?

(In Kilograms) (Approx.)

Approx	Bio degradable	Non-Bio degradable	Hazardous	Others
Less than1 kg.	~			
2-10 kg.	Yes 🗸			
Greater than 10 kg.		Yes✔		Yes

- How is the waste generated in the College managed? By 3.
 - Yes No. How 1. Composting \checkmark Composting 2. Recycling Giving for recycling 3. Reusing Paper print both side
 - 4. Other (specify)

Food waste from Mess

(Biological Hazardous waste)

Given to pig farm

yes 🗸

HAZARDOUS MATERIAL

No any Hazardous material generated in chemistry lab and Civil Engineering labs.

 How many separate boxes do you think you would need to put a class room laboratory To start a waste segregation and recycling Campaign.

No Need

- 5. Do you use recycled paper in College? Yes ✓ No
- How would you spread the message of recycling to other in the community ?
 Have you taken any initiatives? If yes, please specify
 Yes

A survey was carried by Civil department Government College and the DTE has given Instructions accordingly. We are following the necessary guidelines and they have been Circulated to all the department in 2020.

7. Can achieve zero garbage in your College ? If yes, how ?

Yes No

Aurangabad corporation has appointed a private agency (M/s Reddy) to collect the garbages from campus at regular interval.

II - GREENING THE CAMPUS

8.	Is there	e a garden in your College	Yes 🗸	No
	Do stu	dent spend time in the garden ?	Yes 🗸	No
	List the plants with approx. numbers of each species.			
		mbers of plants in campus is approx. 2,491.		
9,	Sugge	st plants for your campus. (Trees, vegetables, he	rbs etc.)	
		Herbs		
10.	List the	e species planted by the students with numbers.		
	1.	Bottle Palm		120
	2.	Neem		15
	3.	Coconut		02
	4.	Umber		01
	5.	Gulmohar and similar species		05
	6.	Rubber (small leaf)		40
	7.	Pipal		06
	8.	Morpankhi		15
	9.	Babul		20
	10.	Rose		30
	11.	Badam		03
	12.	Ashoka		10
	13.	Mango		105
	14.	Assorted plants		40
	15	Guava		375
	16	Dense forest		1200
	17.	Lawns		01 acre

III - ENERGY

- 11. List ten ways that you use energy in your College.
 - 1. Light & Fans
 - 2. Heating Refrigeration & Air conditioning system
 - 3. Internet & Computer
 - 4. Practical equipments
 - 5. Pumping

(Electricity, Diesel Generators, LPG, Solar, Biogas).

Using this list try to think of ways that you could use less energy every day.

Sr. No.	Energy	Reduction of usage
1.	Electricity	10 %
2.	Generator	20 %
3.	LPG	00 %
4.	Solar	20 %

12. Are there energy saving methods employed in your College ?

If yes, please specify.

```
Yes 🗸 No
```

CFL Lamps are installed in the College (Provision of CFL/LED Lamps wherever

Possible)

Solar Water heaters are used in hostel

Optimum use of electrical equipment.

LCD monitors are used in computer labs.

13. How much money does your College spend on energy such as electricity, gas, firewood etc. in a month record it.

Record Monthly

Month	Electric meter reading	LPG Consumption	Fuel for Generator
June-2020	34049	Rs. 00	Rs. 5000
July-2020	22768	Rs. 00	Rs. 5000
Aug- 2020	23316	Rs. 600	Rs. 5000
September-2020	39570	Rs. 600	Rs. 5000
October-2020	31540	Rs. 600	Rs. 5000

- 14.
 How many CFL* bulbs has your College installed?
 100

 If none, why not?
 Electronic tubes are also installed in Collee Campus
- Are any alternative energy sources employed/installed in your College?
 Yes

 No
 (Photovoltaic cells for solar energy, energy efficient stoves, etc) Specify –
 Solar collecting panels are installed for water heating in the hostels.
- 16. Do you run "switch off" drills at College? Yes No
 Boards are displayed in each lab and class room as "Switch of light and fan when You leave."
 Auto switches with illumination intensity sensors are installed in the main building for Overnight illumination.
- 17. Are your computers and other equipment put on power saving mode ?

Yes✓ No

 Does your machinery (TV, AC, Computer, weighing balance printers etc) run on standby Modes most of the time ?
 If yes, how many hours ?
 Yes V
 No 02 Hours

IV - WATER CONSERVATION

- 19. List four uses of water in your College
 - 1. Drinking
 - 2. Washrooms
 - 3. Laboratories
 - 4. Gardening
- How does your College store water ? Are there any water saving Techniques followed in your College ? Yes ✓ No
 What are they ?
 College having underground and overhead tanks with cover ?
- 21. If there is water wastage, specify why? Yes No ✓
 How can the wastage be prevented / stopped?
 It is prevented by using push back taps and flushes.
 Wastage from the RO filters is collected in open tank and used for garden.
- 22. Locate the point of entry of water and point of exit of waste water in your College.

Entry - AMC water supply, Bore well and open well.

- Exit Drainage
- Where does your water come from ? (source)
 Water comes from
 Jayakwadi reservoir, open well and Bore well in the campus.
- Where does the waste water go ?

All waste water is collected through underground sewers and disposed to outside drainage.

- 23. Write down four ways that could reduce the amount of water used in your Institute.
 - 1. By using push cock system.
 - 2. Avoid evaporation of water.
 - 3. Provided glass for drinking purpose.
 - 4. By making awareness in students to save the water.
- 24. Record water used from the College water meter for six months (Record at the same time of each day). At the end of the period, compile a table to show how many liters of water have been used.

Week	Water for toilet (Ltr)	Water for drinking (Ltr)	Water for gardening (Ltr)	Water for laboratory
1	12000	50000	15000	500
2	12010	49998	15007	498
3	12005	50005	12010	504
4	12015	50010	15015	515

 25.
 Does your Institution harvest rain water ?
 Yes ✓
 No

 If yes, how many rain water harvesting units are there ?
 02

V - ANIMAL WALFARE

26. List the animals (wild and domestic) found on the campus (dogs, cats, squirrels, birds insects etc)

Dogs - 05 Cats - 02 Squirrels - 10 Birds of various species – Ample.

27. How many dogs in your area have undergone Animal Birth Control Anti Rabis (ABC-AR) ? AMC carries out this regular activity.

How many need ABC - AR ? AMC carries out this regular activity.

- 28. Which is the animal welfare organization nearest to your College ?

 Does it have an ambulance service ?
 Yes
 No ✓
- Is there any incidence of animals getting wounded/affected due to unfavourable conditions existing in your College on nearby (like a dog getting wounded, poisoning of animals, improper caging of animals, hunting of animals etc)

Yes No 🗸

What did you / your College / neighbour do?

Nil

VI - GENERAL

30. Are you aware of any environment laws pertaining to different aspects of environmental Management ? Yes✓ No

31. Does your College have any rules to protect the environment ?

Yes 🗸 No

List possible rules you could include.

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CONCLUSIONS

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The main recommendations are :

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Dr Deepak N. Kakade Aurangabad. NA Read No

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Date:

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ADDRESS

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Telephone No.

0240-2403001, 0240-2403011

E-mail ID : principal@pesgoe aclin

Name of Co-Ordinator :

Prof. Dr. Deepak N. Kakade

Telephone No.

9049155005

Date commenced

01/07/2021

Put √ mark in appropriate box

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2-10 kg.	Yes			
Greater than 10 kg.		Yes✓		Yes

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3. Reusing Image: A constraint of the cycling for recycling for recycl	1.	Composting	\checkmark	Composting
3. Reusing Image: Paper print both s 4. Other (specify) Given to pig farm	2.	Recycling	\checkmark	Giving for recycling
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02

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