



# JIBANTALA ROKEYA MAHAVIDYALAYA

Affiliated to University of Calcutta | ESTD.: 2007

© P.O.- Mallickati, P.S.- Jibantala,  
Pin- 743502, Dist.- South 24 Parganas

🌐 www.jibantalarokeyamahavidyalaya.in  
@ jmrokeya@gmail.com

President: **Saokat Molla**

Principal & Secretary: **Dr. Anup Maji**

Ref. No. ....

Date: .....

## 6.5.2 (a) Quality Assurance initiatives of the institution include:

The college conducted the following quality audits in the past 5 years, the reports and certificates of which are attached herewith

- 1) Gender Audit 2018-2023
- 2) Energy Audit
- 3) Green Audit Report



*Dr. Anup Maji*  
**Dr. Anup Maji**  
Principal  
Jibantala Rokeya Mahavidyalaya  
P.O.-Mallickati, 24 Pgs. (S)

# JIBANTALA ROKEYA MAHAVIDYALAYA

ESTD: 2007  
P.S.- JIBANTALA, DIST.- SOUTH 24 PARGANAS  
WEST BENGAL, PIN- 743502

## GENDER AUDIT REPORT: 2018-2023



## Introduction of the Gender Audit:

In human society, men and women are complementary to each other. From the prehistoric time to the present, our world is beautiful and prosperous with the coexistence and cooperation of both. Hence awareness about Gender Equality is necessary. Bidrohi Kobi Nazrul Islam has clearly said about this in his 'NARI' poem:

“বিশ্বে যা-কিছু মহান সৃষ্টি চির কল্যাণ -কর  
অর্ধেক তার করিয়াছে নারী, অর্ধেক তার নর।”

Gender equality is not about awareness or eradicating gender differences but providing equal fundamental rights and benefits to all genders. Gender equality is essential for economic prosperity and it prevents violence against women and girls. Societies that value women and men as equal are safer and healthier.

A College is an institution of higher learning. Adult boys and girls come here to fulfill their dreams of higher education. Therefore, maintaining gender equality also falls under the responsibility of the college.

Gender Audit is an attempt to study whether the college has an appropriate gender balance. It tries to see whether college follows government rules, policies and action formulation for up-gradation of women in society. The Gender Audit tries to assess the impact of its current and proposed policies on gender equality.

## Objectives of gender audit

### The gender audit has the following objectives:

- To find out the areas where gender imbalance exists and the factors behind it.
- To establish good gender balance in decision making process in all areas of the college activities.
- To suggest measures for bridging the gender gap.
- To foster gender equality in all aspects of college community.
- To see the work and capacity for prevention of sexual harassment in the college.

## Introduction of the college:

Foundation stone of Jibantala Rokeya Mahavidyalaya was laid on 2nd June 2007. The initial name of the college was 'Jibantala Mahavidyalaya'. Later the present name was approved by the Higher Education Department, Government of West Bengal on 28th May 2007. The college is affiliated to the University of Calcutta and is recognized by the University Grants Commission under section 2(f) and 12 (B). At present students are taught in 07 Honours and 09 General subjects in the arts department. We are glad and proud that more and more students from

remote rural areas of this region are taking admission in college for higher education. In this context, the Gender Audit at Jibantala Rokeya Mahavidyalaya is an attempt to study whether the institution has the requisite gender balance and identify ways to make college campus safe for women.

## Gender policy statement of the Institution

- There shall not be any kind of discrimination on the basis of gender.
- The institution shall provide equal opportunity for all genders.
- Freedom for all genders to express free and fair opinion.
- There must be an accessible, active, unbiased and confidential grievance redressal mechanism.
- The institute shall arrange to provide effective measures for the safety and security of all gender.

## Gender policy of the college

Gender policies are important for creating a more inclusive and equitable society and ensures that people of all genders have equal opportunities to thrive. The college strives to set guidelines, regulations and prerequisites that aim to promote gender equality, prevent discrimination and ensure a safe and inclusive environment for people of all genders.

- Education and learning: Awareness programs and seminars are held to raise awareness about gender issues and to promote gender sensitive practices.
- Harassment and violence: Sexual harassment of women at workplace (prevention prohibition and redressal) Act and Rules, 2013 ("Law") mandates every employer to "provide a safe working environment at the workplace which shall include safety into contact at the workplace." (Section 19(a)). The college has a fully functional Internal Complaint Committee (ICC) to address sexual harassment issues. The college also has Anti- Ragging Cell that addresses and prevents harassment and violence in campus.
- Gender equality and gender inclusiveness: The college promotes female representation at senior decision making position of the organization. The college also encourages equal participation of both male and female students in all activities of the college. There is a ladies' common room with ladies' indoor games facilities.
- Safety and security: The College arranges effective measures for the safety and security of all gender.

Basic sanitation facility in the form of separate toilets for the students and staff is provided in the campus.

### **Facilities for Students in Jibantala Rokeya Mahavidyalaya:**

All basic amenities for students are available in the college as:

- ❖ Information boards
- ❖ Complaint Box
- ❖ Suggestion Box
- ❖ Aqua guard supplemented drinking water points
- ❖ First aid facilities
- ❖ Canteen for students and faculties
- ❖ Girl's common room with all basic facilities
- ❖ Sanitary pad Vending Machine
- ❖ Unique ID number provided to all students for their identification
- ❖ Online admission and examination form submission system available
- ❖ Separate washrooms for faculty (gents and ladies) and students (boys and girls)
- ❖ Central library with a wide range of text books/reference books in each subjects with a reading room
- ❖ Smart classroom

### **Some Initiatives:**

Certain other initiatives and programmes are organized in this regard. They are:

- **ENSURING SAFETY AND SECURITY:** For safety of the students, the college has appointed a security guard. ID cards are issued to the students and without which they are not allowed inside the college.

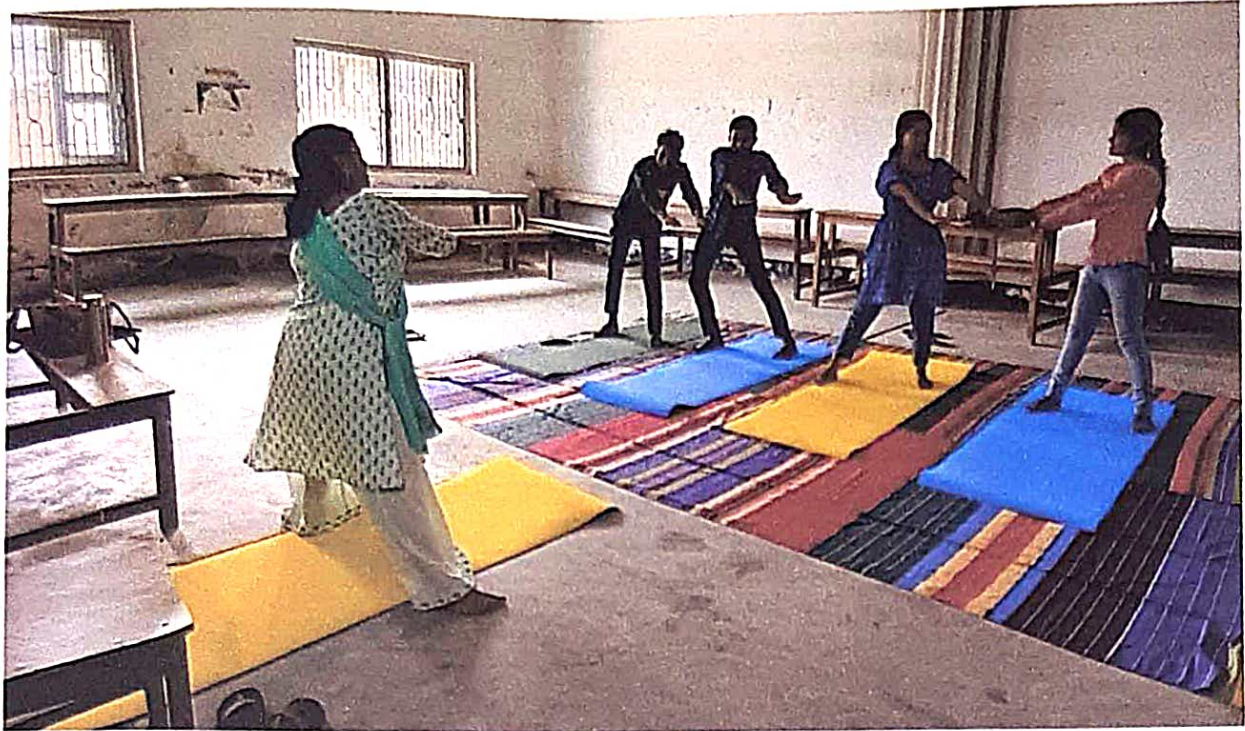


- **SANITARY PAD VENDING MACHINE:** Sanitary pad vending machine has been installed for girl's students.

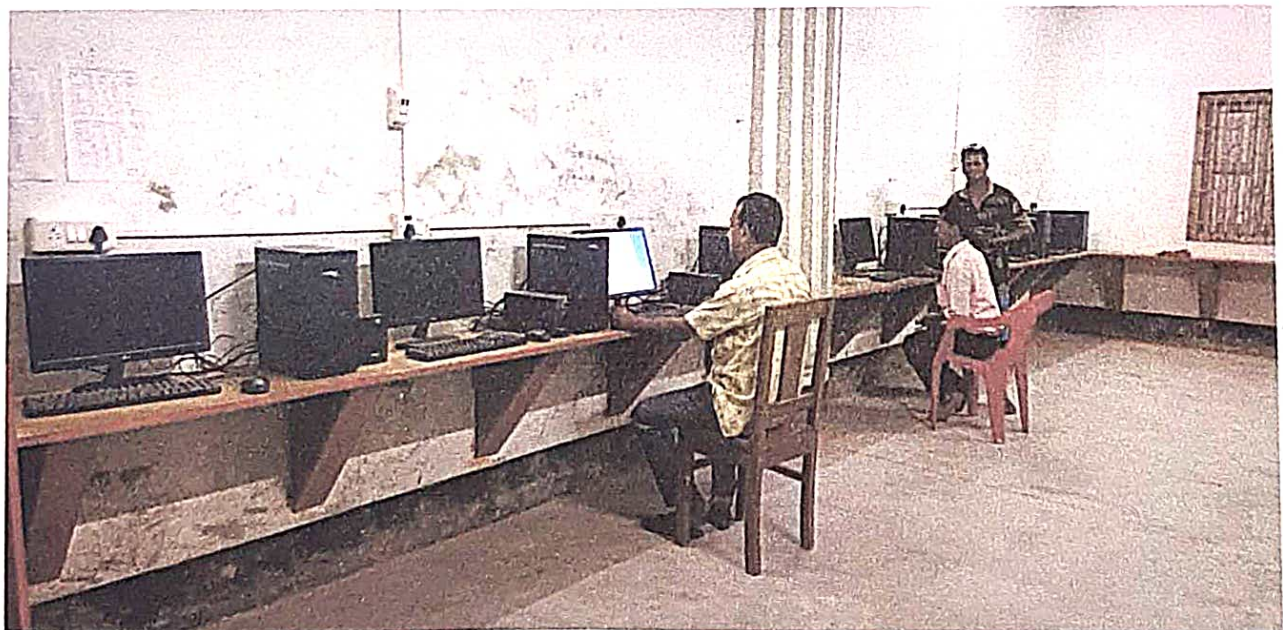


- **SCHOLARSHIPS:** Different scholarships, namely, Kanyashree, Student Aid Fund, Swami Vivekananda Merit-cum-means Scholarship, West Bengal Chief Minister Financial Assistance, Post Metric Minorities Students scholarship, Aikyashree-Government of West Bengal, are available to the students.
- **SELF-DEFENCE AND YOGA COURSES:** The college has been conducting self-defense courses for the last 7 years, to develop the ability to protect oneself from physical harm. Few of them have earned recognition at the state level. Regular classes on Self-defense and Yoga are conducted by invited experts and this has actively contributed towards the physical and mental wellbeing of the students

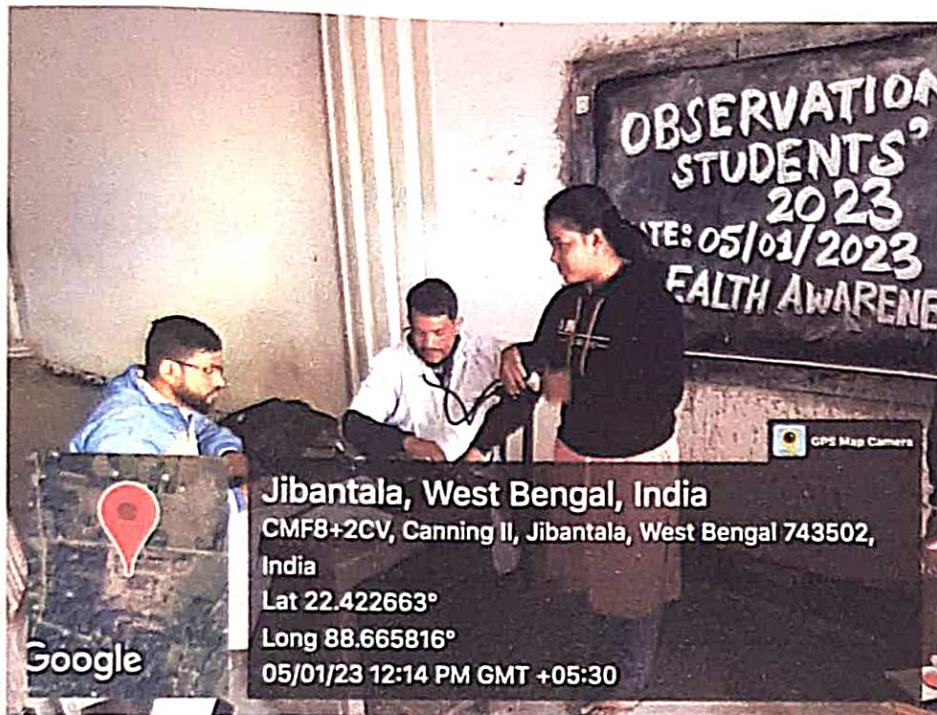




- **Soft skill development:** The institution also involves its Computer lab in soft skills development making students technology savvy.



- **Grievance Redressal Cell, Anti-Ragging Cell, Anti-Sexual Harassment Cell & Students Welfare Cell:** The College has implemented the aforementioned different types of Cell. The Committees work in close association with the Principal of the college.



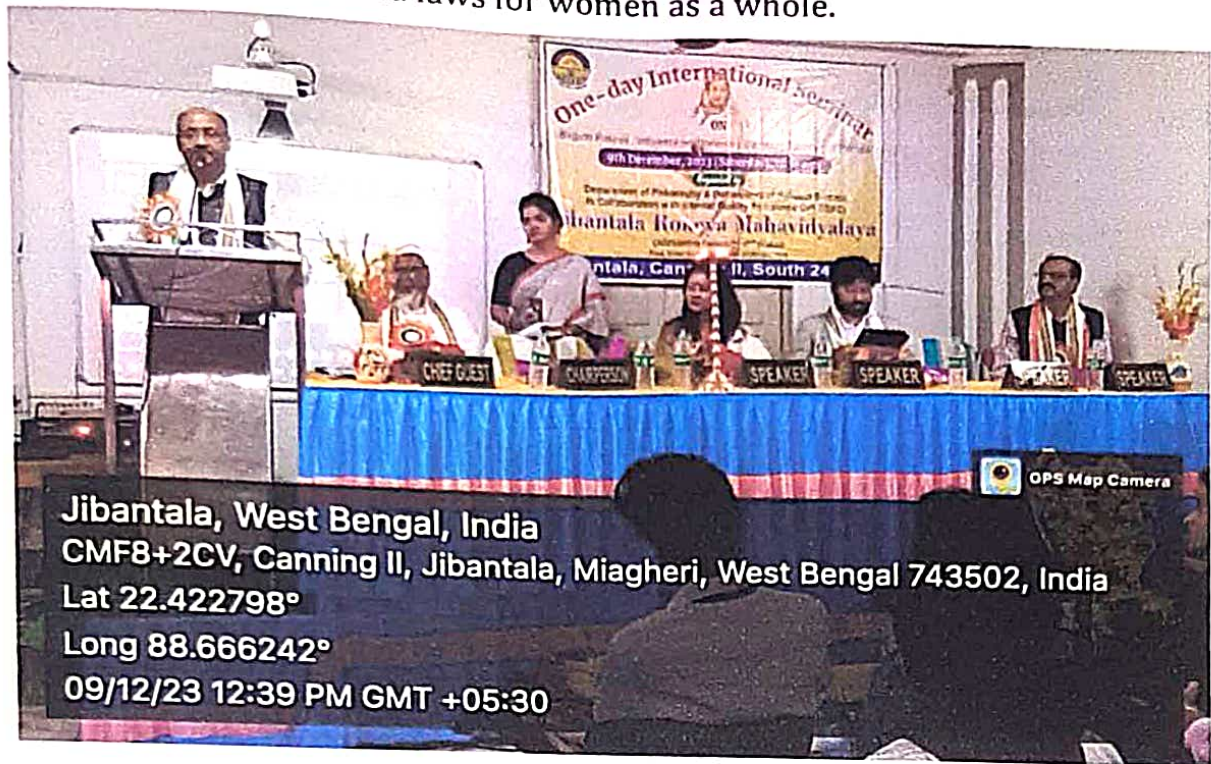
- **Women's Cell:** An educational Institution, Jibantala Rokeya Mahavidyalaya feels the need to sensitize their female and their male students about the rights for equality. Special awareness programmes are organized to promote gender equality:



AWARENESS PROGRAMME: ORGANISED BY Women's CELL FOR THE STUDENTS



- **Observation of International Women's Day:** International Women's Day is celebrated every year with a special lecture for students about Protective Laws for Women with Disabilities and laws for women as a whole.



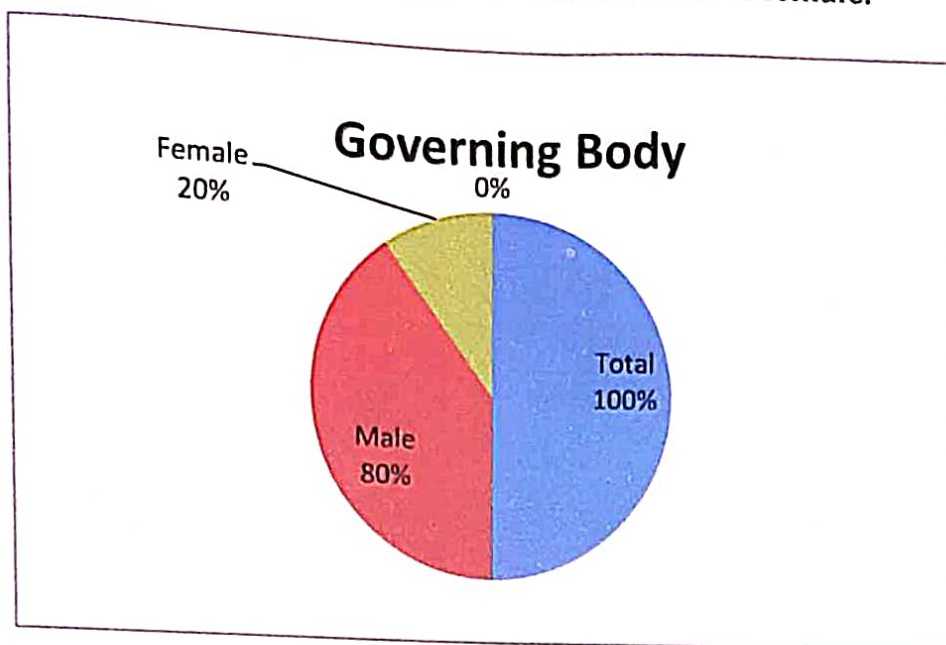
- Birthday celebration of Begum Rokeya to create awareness about women empowerment and their rights.



## Some Relevant Information and Observation:

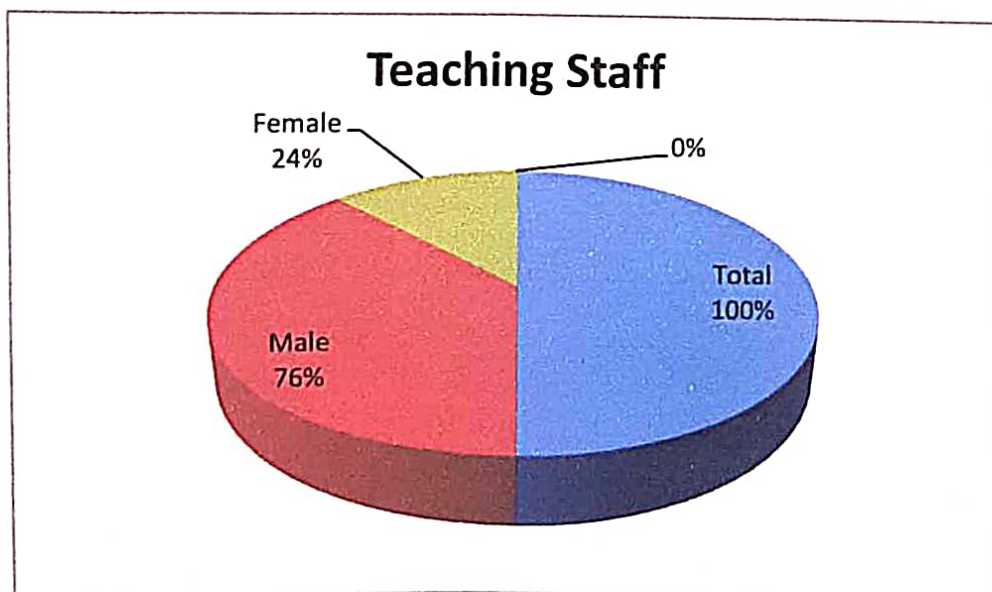
### • Governing Body

- o There are two female members in the governing body of the institution out of eight.
- o One female member in the Governing Body out of two teacher's representatives.
- o Out of the two C.U. Nominee, one of the member is female.



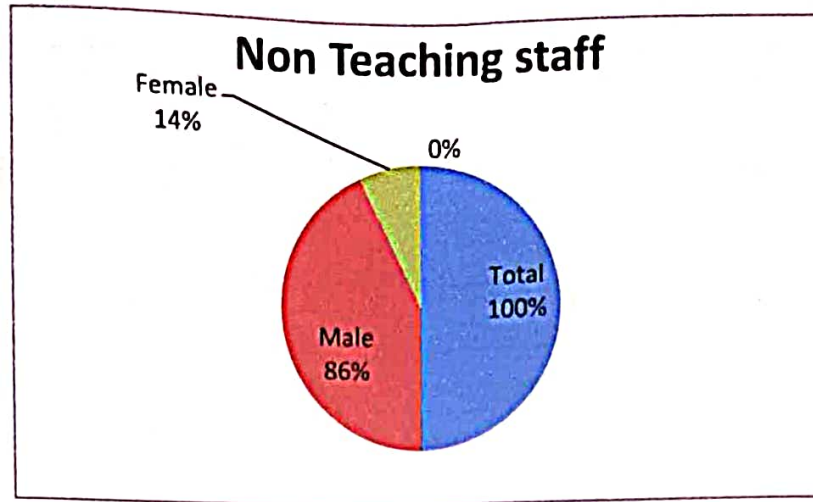
### • Teaching Staff:

TOTAL	MALE	FEMALE
21	16	5



- **Non-Teaching Staff:**

Out of 07 Non-teaching staff working in the college, there is only one female employee.

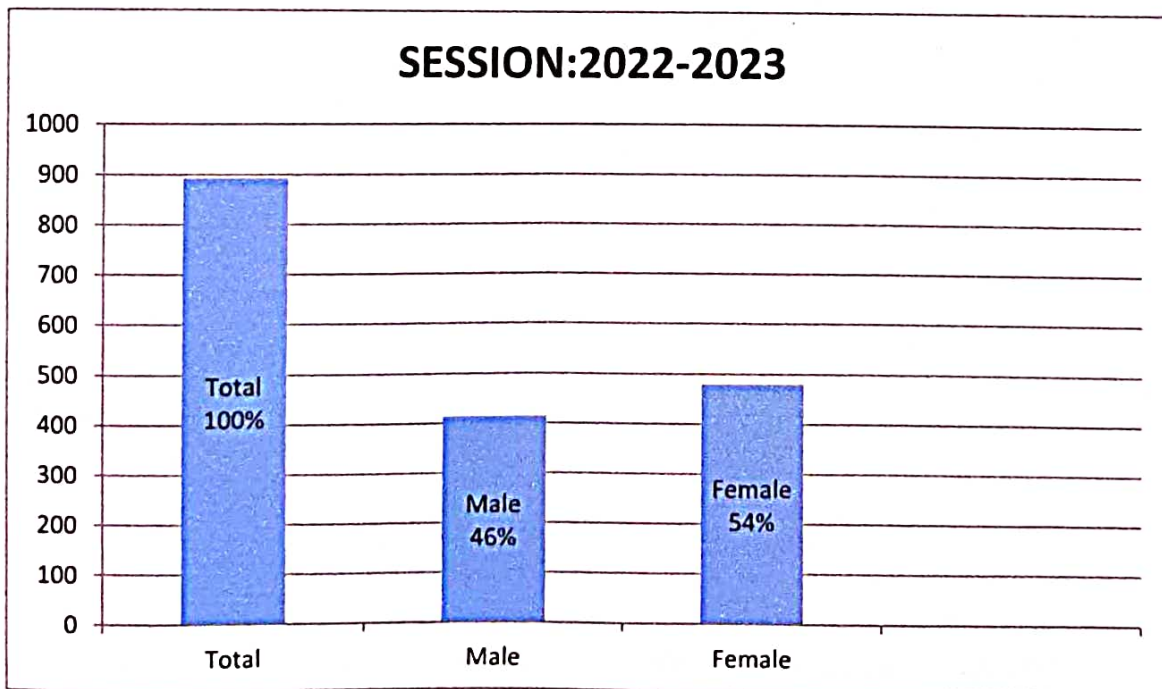
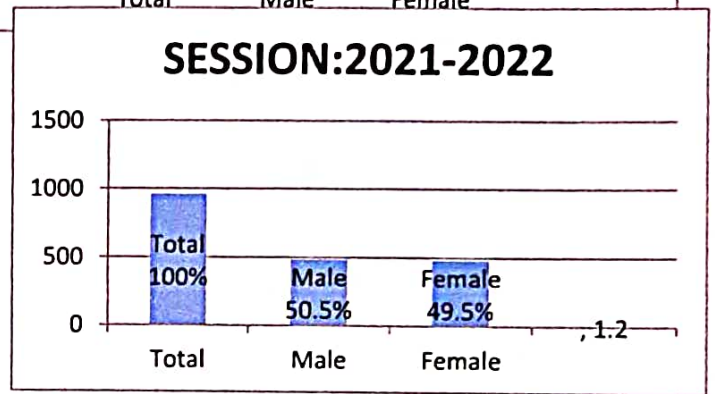
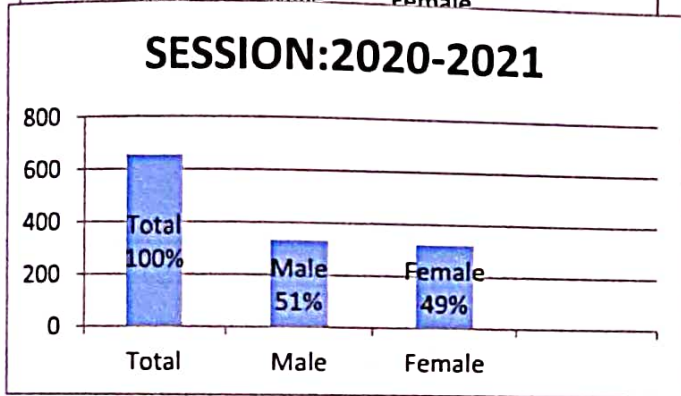
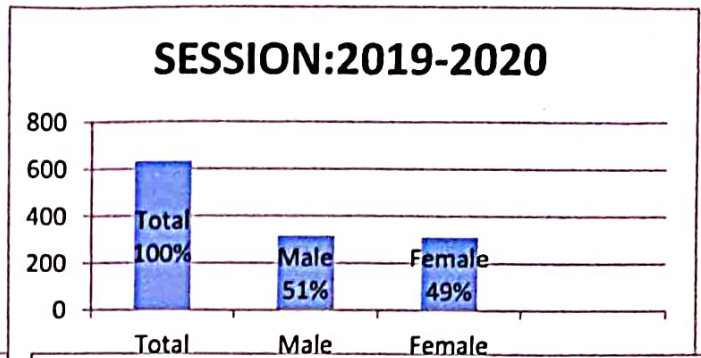
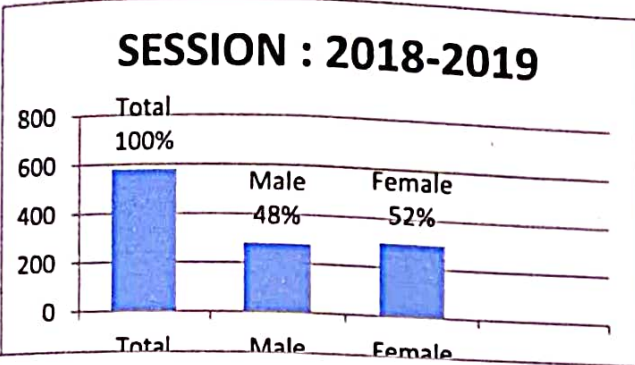


- **Enrolment of Students**

- o **Gender wise Total Enrolment during the last five Years:**

Academic Year	Course	Total	Male	Female
2018-2019	Sem-I	329	172	157
	Part-II	87	36	51
	Part-III	165	73	92
Total Enrolment in this session		581	281	300
2019-2020	Sem-I	370	184	186
	Part-II	12	1	11
	Part-III	91	50	41
	Sem-III	159	84	75
Total Enrolment in this session		632	319	313
2020-2021	Sem-I	378	208	170
	Sem-III	198	98	100
	Part-III	79	26	53
Total Enrolment in this session		655	332	323
2021-2022	Sem-I	495	238	257
	Sem-III	279	149	130
	Part-III	8	6	2
	Sem-V	184	92	92
Total Enrolment in this session		966	485	481

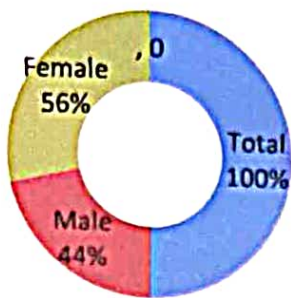
<b>2022-2023</b>	<b>Sem-I</b>	<b>369</b>	<b>161</b>	<b>208</b>
	<b>Sem-III</b>	<b>310</b>	<b>135</b>	<b>175</b>
	<b>Sem-V</b>	<b>215</b>	<b>118</b>	<b>97</b>
<b>Total Enrolment in this session</b>		<b>894</b>	<b>414</b>	<b>480</b>



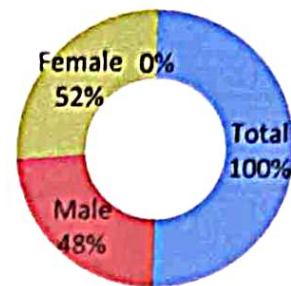
o Gender wise Total Enrolment in B.A.in 2022-23in Three Years:

Honours				GENERAL			
Course	Total	Male	Female	Course	Total	Male	Female
Sem-I	96	36	60	Sem-I	273	125	148
Sem-III	91	49	51	Sem-III	219	95	124
Sem-V	85	41	44	Sem-V	130	77	53
Total	272	117	155	Total	622	297	325

**HONOURS COURSE**



**GENERAL COURSE**



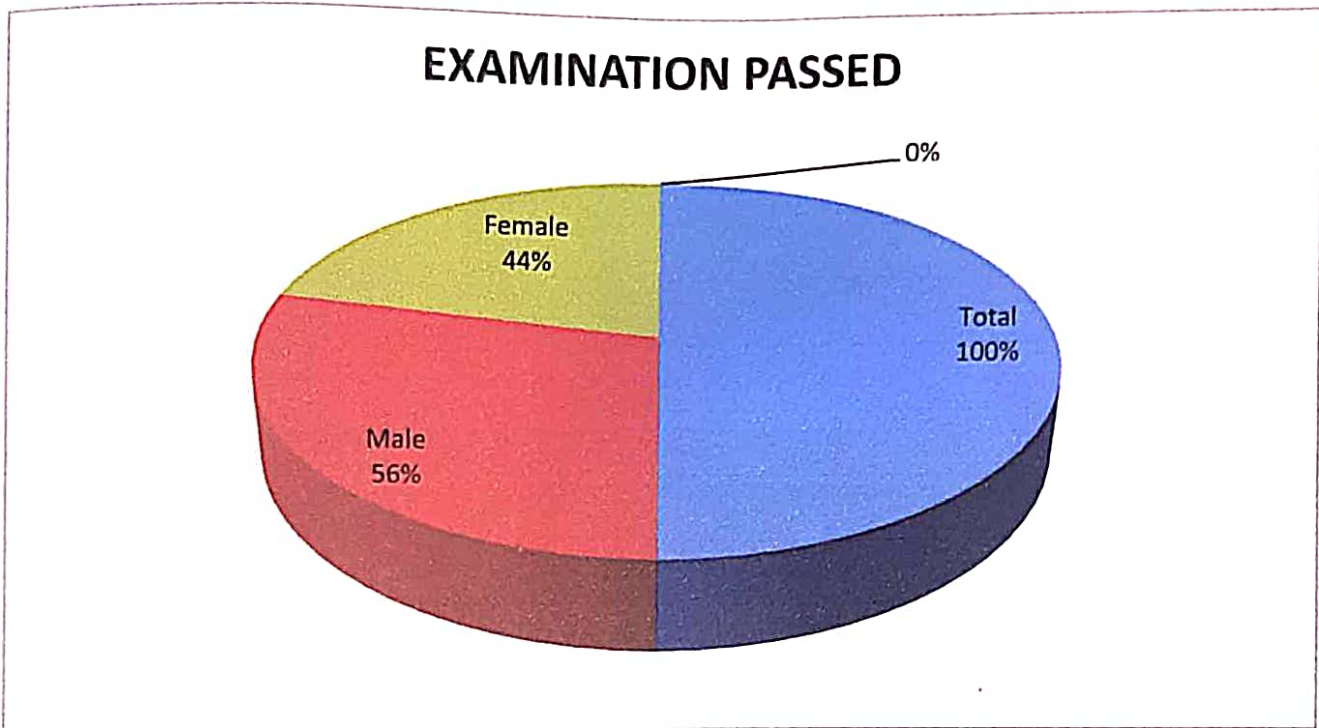
Gender wise Number of Students Passing in Final Examination In2022-2023(Stream-wise):

Subject	Appeared			Passed			First Class		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Arts(G)	106	56	50	55	29	26	41	18	23
Bengali (H)	28	13	15	15	7	8	15	7	8
English(H)	4	2	2	3	2	1	3	2	1
History(H)	35	23	12	23	19	4	23	18	4
Pol.Science(H)	4	2	2	0	0	0	0	0	0
Philosophy(H)	2	0	2	2	0	2	2	0	2
Sanskrit(H)	0	0	0	0	0	0	0	0	0
Education(H)	7	2	5	7	2	5	7	2	5

- We observe a contrasting picture in case of Arts (general) stream. More number of Female students got 1<sup>st</sup> Class than Male candidates. The scenario is same for Bengali(Honours), Philosophy (Honours) and Education (Honours). Two candidates who qualified with first class marks (above60%) in Philosophy(Honours) is a girl.
- We find equal number of male and female students in English (Honours) & Pol. Sc (Honours) who are appearing for the final examination.

Gender wise No. of Students passing in final Examination in 2022-2023 (TOTAL)

APPEARED	PASSED		
	Total	Male	Female
186	105	59	46

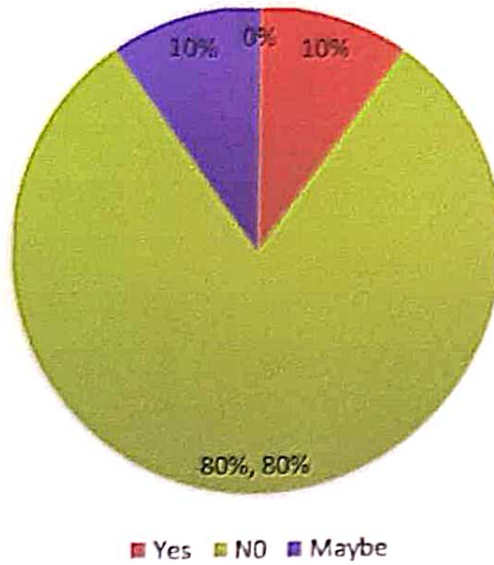


• **Summary of Observations:**

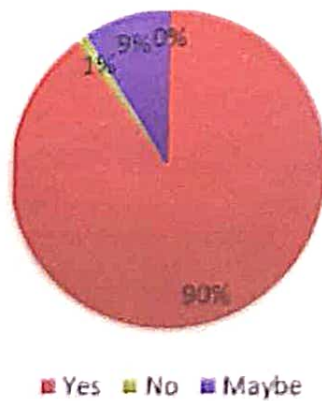
- o There are a number of female members in the governing body, although not equal. But some of the female members are performing important duties.
- o The number of female teachers in the institution is less.
- o However, the gender distribution is highly skewed when it comes to non-teaching staff
- o In case of the students of B.A.(H) and B.A.(G) courses, in the academic session 2018-2019 & 2022-2023 the girls were more admissions than boys.

# GENDER AUDIT SURVEY

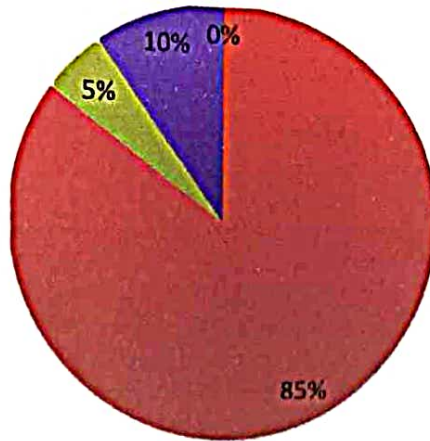
Do you know college has CCTV surveillance?



Adequate number of toilets are available in campus for girls?

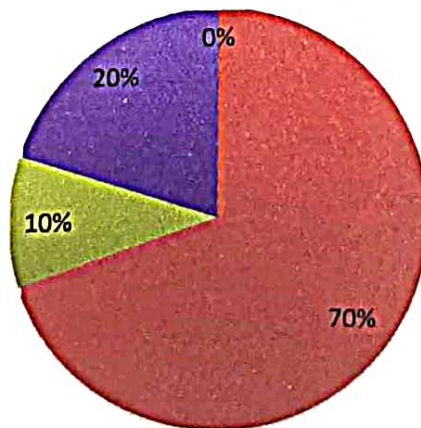


**The class room offers equal opportunities to all genders?**



■ Agree ■ Disagree ■ Nutral

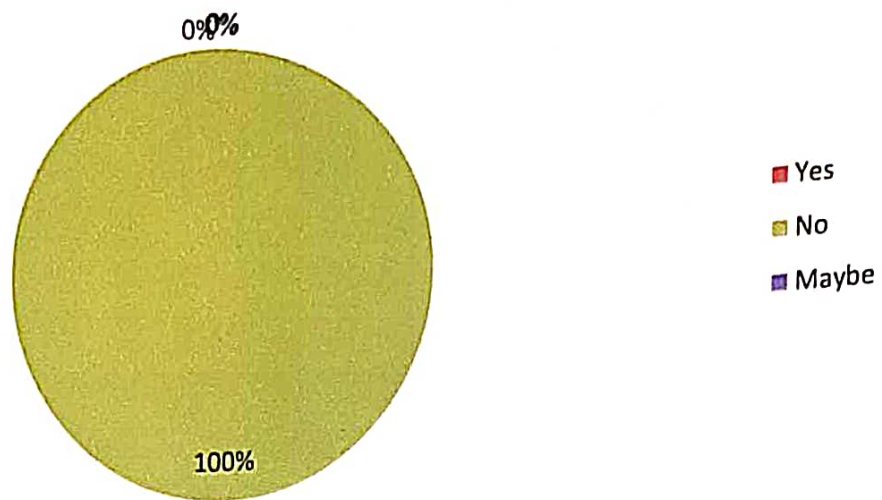
**There is equal opportunity to all genders for free and fair espersion of ideas?**



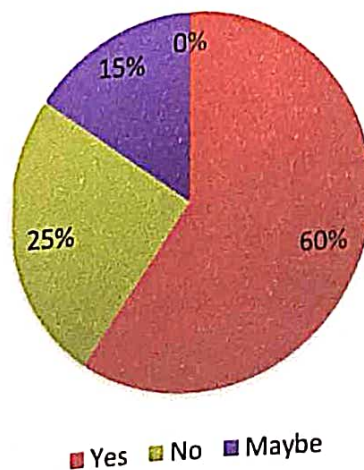
■ Yes ■ No ■ Maybe



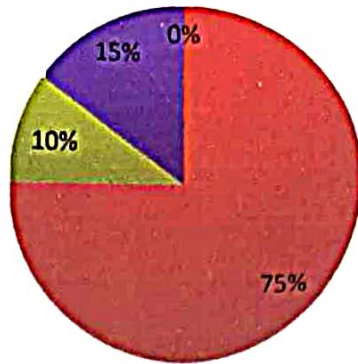
Have you faced gender discrimination in your college?



Do you know the college has women cell, Anti-sexual harassment cell and grivance cell?

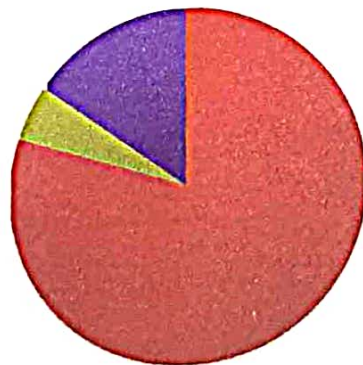


**Adequate lighting is available inside the campus, in corridor, class rooms, common areas, toilet etc.?**



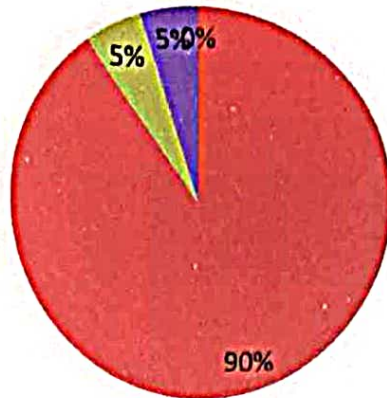
■ Yes ■ No ■ Maybe

**Does the college have separate common rooms and games room for male & female Students?**



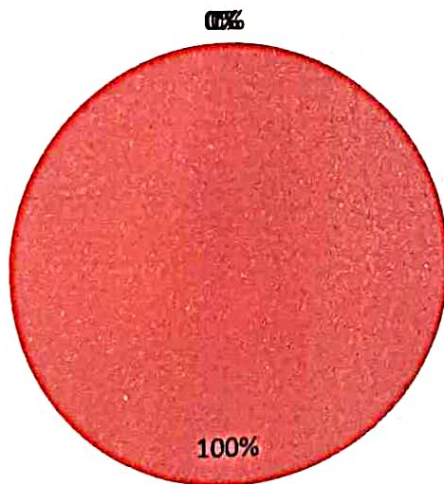
■ Yes ■ No ■ Maybe

**Does the college give equal opportunity for extracurricular, games & sports activities to all students irrespective of genders?**



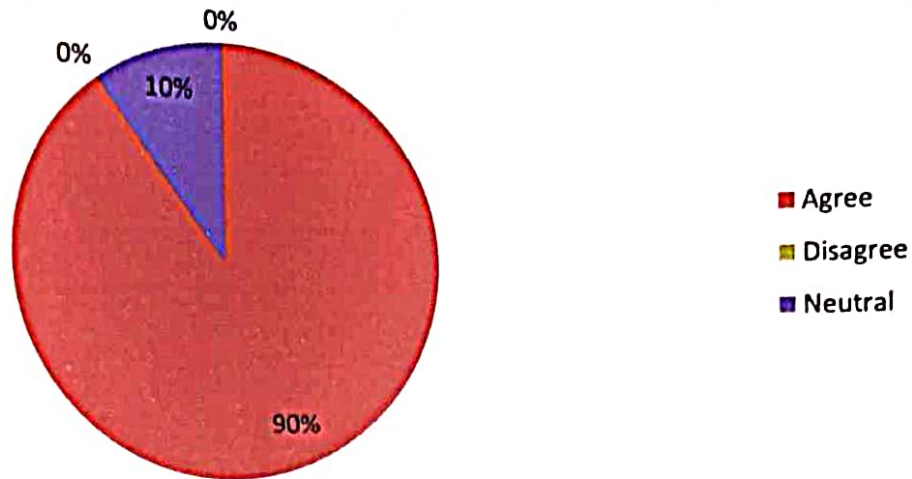
■ Yes ■ No ■ Maybe

**The college conducts gender sensitization program?**



■ Agree  
■ Disagree  
■ Neutral

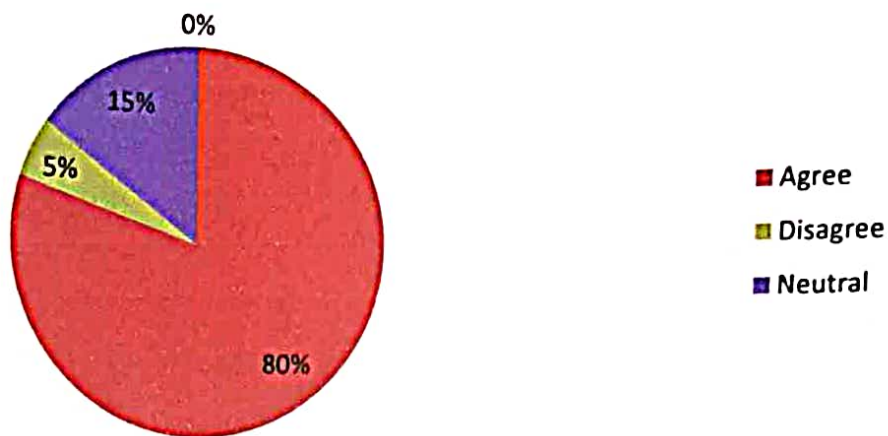
### Are women well represented in the college administrative?



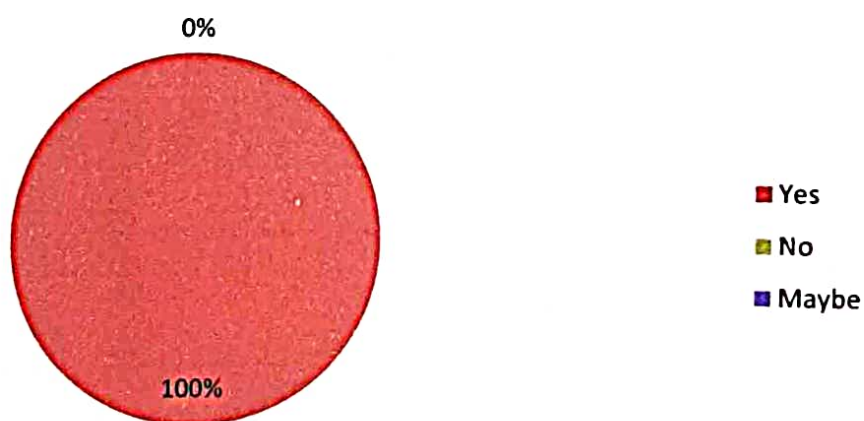
### Leaves like parental and child care are available and granted to the employees readily?



**Does the college offer flexible working hours and /or flexible work locations in case of real emergency?**



**Does the college have an anti -sexual harassment, anti- gender violence policy or equivalent ?**



## Findings:

- Steps to be taken to increase female participation in non-teaching faculty position
- Number of washroom for girl's students to be increased.
- Add- on courses/ vocational courses may be incorporated that encourage girl students to explore entrepreneurship skills and self-employability.
- Provision for separate reading rooms for girl students may be increased.
- More books in the library maybe incorporated that encourage girl students to aspire for higher learning and independent.

## Conclusion


Gender audit of the college makes it clear that the college has much strength and some limitations. The limitations can be reduced with gradual changes. The findings show that college plays a crucial role to maintain harmony and discipline among students. Doubtless, the enrolment of girls has been increasing and there are no complaints based on gender issues. Some programs are conducted for both male & female.

**EXTERNALAUDIT TEAM:**

1. Dr. Manas Kumar Adhikari, Principal, Sushil Kar College
2. Dr. Ayantika Ghosh, Principal, Naba Ballygunge Mahavidyalaya
3. Dr. Dhruba Charan Hota, Principal, Sukanta College

**INTERNAL AUDIT TEAM:**

1. Dr. Anup Maji ; Principal, Chairperson Jibantala Rokeya Mahavidyalaya
2. Sukanya Pal, Convener, Women Cell, Jibantala Rokeya Mahavidyalaya
3. Tina Basu, Member, Women Cell, Jibantala Rokeya Mahavidyalaya
4. Baishakhi Das Kayal, Women Cell, Jibantala Rokeya Mahavidyalaya
5. Sabana Molla, Women Cell, Jibantala Rokeya Mahavidyalaya

  
Signature of the Expert

Designation:

Seal: Principal  
Susil Kar College  
Champahati, 24 Pgs.(S)

  
Signature of the Expert

Designation:

Seal: Principal  
Naba Ballygunge Mahavidyalaya  
27E, Bosepukur Road  
Kolkata-700 042

  
Signature of the Expert

Designation:

Seal:  
Dr. Dhruba Charan Hota  
Principal  
SUKANTA COLLEGE  
Bhangankhali, Basarib, 24 Pgs. (S)

  
Signature of the Principal

Designation **Dr. Anup Maji**  
Principal

Seal  
Jibantala Rokeya Mahavidyalaya  
P.O.-Mallickati, 24 Pgs. (S)

  
Signature of the Convener

Women cell of J.R.M.

**Jibantala Rokeya Mahavidyalaya**  
**Jibantala, Canning-II, South 24 Pgs**  
**Pin-743502**

# **ENERGY AUDIT REPORT**

## **For the Year 2022-23**





# Contains

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# CERTIFICATE



PRESENTED TO

# Jibantala Rokeya Mahavidyalaya

Jibantala, Canning-II, South 24 Pgs, Pin-743502.

Has been assessed by the audit team for the comprehensive study of energy audit on Institutional working framework to fulfil the requirement of

## ENERGY AUDIT

The energy saving initiatives has been taken by the Institution have been verified in the report submitted and were found to be satisfactory.

The effort taken by management and faculty towards all types of energy used in the Institution and sustainability are highly appreciated and noteworthy.

Date:28/03/2023

*S. Kayal*

**Mr. S. Kayal**

Lead Auditor EMS & Energy (EnMS)

NBQP(QCI) registered Principal Auditor



# ACKNOWLEDGEMENT

We would like to thank the management of Jibantala Rokeya Mahavidyalaya for assigning this important work of Energy Audit. We appreciate the co-operation to the teams for completion of assessment.

We would also like to thank **Dr. Anup Maji (Principal)**, for his continuous support and guidance, without which the completion of the project would not have been possible. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

We would like to thank **Dr. Anup Maji (Principal)**, Jibantala Rokeya Mahavidyalaya for giving us an opportunity to evaluate the performance of the campus.



# DISCLAIMER

Energy Audit Team has prepared this Energy Audit Report for Jibantala Rokeya Mahavidyalaya based on input data submitted by the representatives of college complemented with the best judgment capacity of the expert team.

While all reasonable care has been taken in its preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the conclusions are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

Auditor and its staff and agents shall keep confidential all information relating to your organization and shall not disclose any such information to any third party, except that in the public domain or required by law or relevant accreditation bodies. Auditor staff, agents and accreditation bodies have signed individual confidentiality undertakings and will only receive confidential information on a 'need to know' basis.

**Supriyo Kayal**  
**Lead Auditor EMS & Energy**



# ABBREVIATION

<b>A</b>	<b>Amps</b>
<b>AC</b>	<b>Air Conditioner</b>
<b>AC</b>	<b>Alternating Current</b>
<b>AMET</b>	<b>Academy of Maritime Education and Training</b>
<b>CFL</b>	<b>Compact fluorescent lamp</b>
<b>CIP</b>	<b>Comprehensive Inspection Programme</b>
<b>DC</b>	<b>Direct Current</b>
<b>HSD</b>	<b>High Speed Diesel</b>
<b>Hz</b>	<b>Hertz</b>
<b>kg</b>	<b>Kilogram</b>
<b>kVA</b>	<b>kilo-volt-ampere</b>
<b>kW</b>	<b>kilo Watts</b>
<b>kWh</b>	<b>kilowatt hour</b>
<b>kWp</b>	<b>Kilowatt peak</b>
<b>LED</b>	<b>Light Emitting Diode</b>
<b>LPG</b>	<b>Liquefied Petroleum Gas</b>
<b>MMS</b>	<b>Module mounting structure</b>
<b>MPPT</b>	<b>Maximum Power Point Tracker</b>
<b>NAAC</b>	<b>The National Assessment and Accreditation Council</b>
<b>SEC</b>	<b>Specific Energy Consumption</b>
<b>TV</b>	<b>Television</b>
<b>V</b>	<b>Volts</b>
<b>W</b>	<b>Watts</b>
<b>W/m<sup>2</sup></b>	<b>watt per square metre</b>



# OVERVIEW OF THE COLLEGE

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**Jibantala Rokeya Mahavidyalaya** started its journey in 2001. Later on it had its U.G.C. approval. We should call up those who played the important role for the development of the institution. Their contribution is undebatable. They have lots of dreams concerning the college. They have been trying to uplift the 1/2 storied building to a 4 storied building in the days to come. we dream that the students from our under privileged area and the students from outside will come to study with the subject they are interested in. The kind of great dream can be materialised only with the united and sincere efforts of the common people. Therefore, we congratulate and honour all of you on behalf of the college authority..



## VISION & MISSION

### Mission

The mission of the college is to make, within its limited means, knowledge acquired through higher education reach every deserving school pass out who aspires to take admission to this institution and instill in him/ her a spirit of free inquiry, thereby broadening the scope of higher learning on the one hand, and to help in every possible way students who are needy so that they can carry on and complete their studies and be able to stand on their own feet as responsible citizens on the other.

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We envision a future wherein, through our untiring efforts and collective endeavours, the college will attain a still higher place in the arena of learning and emerge as a beacon to the aspirants for quality education not only in Kolkata but also in the state as a whole. At the same time, we do hope that our students – former, present, and future – will play no lesser a role in raising their alma mater to a position of glory by making their own contribution to the process.



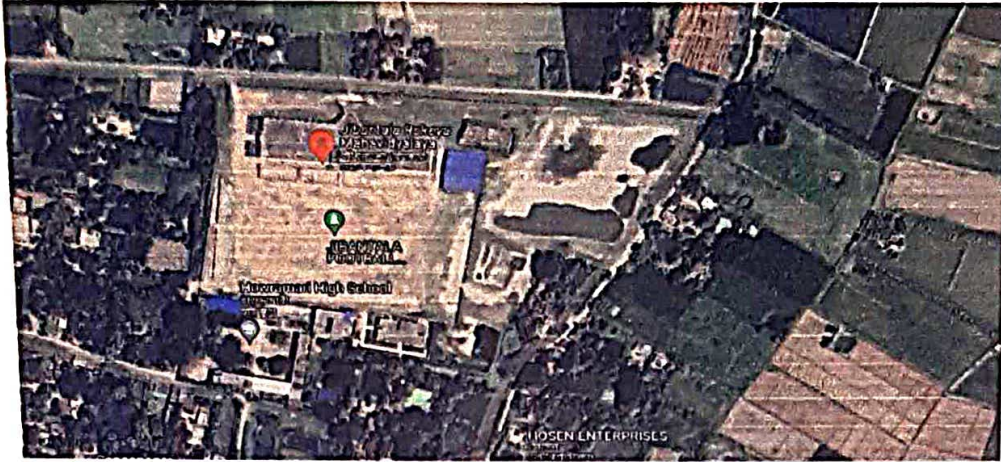
## Energy Policies:

- ✚ Phased manner changing of normal conventional lights to energy efficient LED lights. All new lights procured will be LED lights only.
- ✚ Timely switching off and switching on of street lights.
- ✚ Optimum use of air conditioners. Switch on as and when required.
- ✚ Phased manner replacement of electrical appliances like ACs, Fridge, etc. with Energy efficient (Higher star rating) appliances.
- ✚ Activate power management features on your computer and monitor, so that it will go into a low power “sleep” mode when you are not working on it.
- ✚ Minimum use of ground water by reduced hours of pumping.
- ✚ Regular checking of leakage in water pipe lines and taps.
- ✚ Save water and save electricity stickers placed at prominent places.
- ✚ Conduct of different awareness campaign on “Save Water”, “Save Trees” & Save Electricity through lectures/different competitions etc.
- ✚ Vermi composting is also in practice for disposing the wet waste from canteen and also other biodegradable wastes.
- ✚ Tree plantation in Campus.
- ✚ Ensuring ban on single use plastic bags in campus.
- ✚ **Encourage use of public transport & Car-pooling (i.e. reduced vehicular use in the campus).**
- ✚ Waste collection bins (i.e. burnable, non-burnable & recyclable) and their management.
- ✚ Ensuring proper e-waste management.
- ✚ Initiation for paperless (e-office) & e-documents for routine work.
- ✚ Increasing use of digital library.





Location:



## AUDIT PARTICIPANTS

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On behalf of college

Name	Designation



On behalf of Auditor Services

Name	Position	Qualifications
Mr. Supriyo Kayal	Lead Auditor	M.Sc., DIPC. Energy Management System Auditor

## EXECUTIVE SUMMARY

The purpose of this Energy Audit was to seek opportunities to improve the energy efficiency of the Jibantala Rokeya Mahavidyalaya. Reducing the energy consumption despite improving the human comfort, health and safety were of primary concern.

Beyond just identifying the energy consumption pattern, this audit sought to detect and categorize the most energy efficient appliances. Additionally, some daily practices relating common appliances have been shared which may help reducing the energy consumption. Data collection for energy audit of the campus was carried out by the Auditor Team. The Energy Audit Report accounts for the energy consumption patterns of the institution on actual survey and detailed analysis during the audit.

The work comprehends the area wise consumption traced using suitable equipment. The analysis was carried out by our team with the support of the staff members from Jibantala Rokeya Mahavidyalaya. The report provides a list of possible actions to preserve and efficiently access the available source, resources and their saving potential was also identified. We look forward towards optimization that the authorities, students and staff members would follow the



recommendations in the best possible way. The report is based on certain generalizations including the approximations wherever necessary. The views conveyed may not reveal the general opinion. They merely represent the opinion of the team guided by the interviews of clients. We are happy to submit this Energy audit report to the Jibantala Rokeya Mahavidyalaya.

## Objectives of Energy Auditing

The energy audit provides the vital information base for overall energy conservation program covering essentially energy utilization analysis and evaluation of energy conservation measures. It aims at:

- ✦ Identifying the quality and cost of various energy inputs.
- ✦ Assessing present pattern of energy consumption in different cost centres of operations.
- ✦ Relating energy inputs and production output.
- ✦ Identifying potential areas thermal and electrical energy economy.
- ✦ Highlighting wastages in major areas.
- ✦ Fixing of energy saving potential targets for individual cost centres.
- ✦ Implementation of measures for energy conservation & realization of savings

## Methodology:

- ✦ Methodology adopted for achieving the desired objectives viz.: Assessment of the current operational status and energy savings include the following:
- ✦ Discussions with the concerned officials for identification of major areas of focus and other related systems.
- ✦ Team of engineers visited the site and had discussions with the concerned officials to collect data / information on the operations and load distribution within the plant and same for the overall premises. The data was analysed to arrive at a base line energy consumption pattern.
- ✦ Measurements and monitoring with the help of appropriate instruments including continuous and / or time-lapse recording, as appropriate and



visual observations were made to identify the energy usage pattern and losses in the system.

- ✚ Trend analysis of costs and consumptions.
- ✚ Capacity and efficiency test of major utility equipment's, wherever applicable.
- ✚ Estimation of various losses
- ✚ Computation and in-depth analysis of the collected data, including utilization of computerized analysis and other techniques as appropriate were done to draw inferences and to evolve suitable energy conservation plan/s for improvements/ reduction in specific energy consumption.

# ENERGY AUDIT - ANALYSIS

## 1. ENERGY CONSUMPTION

To understand the Energy Consumption trends and for analysing the average monthly consumption we have collected electricity energy bills from July 2021 to June 2022

The details of "Meter Connection" at "Jibantala Rokeya Mahavidyalaya" are as follows-

Name - The Principal Jibantala Rokeya Mahavidyalaya

CA No. -

### 1.1 Summary of Monthly Electricity Consumption and Total Bill Amount

To understand the Energy consumption trend and for developing the baseline parameter we have collected monthly energy bill for the 12 months i.e. from July 2022 to June 2023

#### Electrical Instruments:

Particulars Quantity

Bulb 90

Tube light 123



Fan 223  
AC 01  
Refrigerator 03  
Micro Oven 02  
Xerox 01  
Computer, Printer 46  
TOTAL 489

**Electrical Instruments:**

<b>Particulars</b>	<b>Quantity</b>
Bulb (LED & P LAIN)	90
Tubelight	123
Fan	223
AC	01
Refrigerator	03
Micro Oven	02
Xerox	01
Computer, Printer	46
<b>TOTAL</b>	<b>489</b>

\* Electricity measured as Units and

\*\* Fuel used for DG set measured in Litre

**Particulars of Electric consumption in Rupees given below:**



JIBANTALA CUSTOMER CARE CENTER, PHONE No - 03319-243000  
 C/O-ALAUDDIN MOLLA,VILL-POYNA, CALL CENTER PHONE No - 19121(TOLL FREE), TAN - KALKAJI

TO THE PRINCIPAL JIBANTALA ROKEYA GHARI, MOLLIKATI, Pin - 743502	Invoice No. : 102542849
Consumer Id : 102542849	Prev. Reading Date : 14.03.2023
Tariff Class : A(ICM-F)	Present Reading Date : 16.06.2023
Installation No : 17781954	Billing Date : 16.06.2023
Latitude : 22.4210807	Next Reading Date: 18.08.2023-10.08.2023
Longitude : 88.6211846	Connected Load : 3.42 KVA
	Solar PV Capacity :
	Meter Reading unit : STATION
	PAN of consumer :

Meter No	Time	Previous Reading	Present Reading	MF	Unit consumed	Max Demand (KVA)
63432394	N	9915.00	10435.00	1.00	520.00	

Breakup of Charges

Category	Total
Energy Charge (Rs.)	3789.55
Fixed/Demand Charge (Rs.)	327.40
Meter Rent (Rs.)	400.00
MVCA Charge (Rs.)	119.00
Electricity Duty (Rs.)	4701.13
Gross Amount (Rs.)	15344.33
Outstanding Amount (Rs.)#	0.00
Adjustments**	

Payment may be made using RTGS/NEFT in your exclusive a/c no: WBB1025428491984 with ICIC0000104  
 As per order of WBERC dated 30.03.2023 & Subsidy from West Bengal Govt  
 \* Outstanding: Rs.15344.33 for JAN2023-JUN2023  
 Last Payment Details: Amount (Rs.): 7683.00 Payment date : 27.09.2019  
 Estimated Consumption.  
 Non-availability of consumer premises.  
 Security Deposit: Rs. 14008.89



JIBANTALA CUSTOMER CARE CENTER, PHONE No - 03218-265009  
 C/O-ALLAUDDIN MOLLA, VILL-POYNA, CALL CENTER PHONE No - 191211(TOLL FREE), TARIK

TO THE PRINCIPAL JIBANTALA ROKEYA GHARI, MOLLICKATI, Pin - 743502	MAHAVIDYALAYA, MIYEAR	Invoice No. : 47701681009 Prev. Reading Date : 15.03.2021 Present Reading Date : 08.06.2021 Billing Date : 08.06.2021 Next Reading Date: 18.08.2021-22.08.2021 Connected Load : 3.64 KVA Solar PV Capacity : Meter Reading unit : 11A5JUMR PAN of consumer(s) :
Consumer Id : 102542849 Tariff Class : A(CH-R) Installation No : 17781984 Latitude : 22.3741114 Longitude : 88.7333108		

Meter No	Time	Previous Reading	Present Reading	MF	Unit consumed	Max Demand (KVA)
B3432394	N	12106.00	12168.00	1.00	62.00	

**Breakup of Charges**

Category	Total
Energy Charge (Rs.)	382.54
Fixed/Demand Charge (Rs.)	327.40
Meter Rent (Rs.)	15.00
MVA Charge (Rs.)	15.00
Gross Amount (Rs.)	761.94
Outstanding Amount (Rs.)#	35647.71
Adjustments**	0.00

Payment may be made using RTGS/NEFT in your exclusive a/c no: WBB1025428491064 with ICIC000104  
 As per order of WBERC dated 30.03.2023 & Subsidy from West Bengal Govt  
 P Outstanding: Rs.35647.71 for JAN2020-JUN2021  
 Last Payment Details: Amount (Rs.): 7683.00 Payment date : 27.09.2019  
 Security Deposit: Rs. 14008.89



JIBANTALA CUSTOMER CARE CENTER, PHONE No - 03218-265009  
 C/O-A.LLAUDDIN MOLLA, VILL-POYNA, CALL CENTER PHONE No - 03218-265009

TO THE PRINCIPAL  
 JIBANTALA ROKEYA MAHAVIDYALAYA, MIYER  
 GHARI, MOLLIKATI,  
 Pin - 743502  
 Consumer Id : 102542849  
 Tariff Class : A(CH-R)  
 Installation No : 17781984  
 Latitude : 22.423004  
 Longitude : 88.6661005

Invoice No. : 430011630252  
 Prev. Reading Date : 14.03.2022  
 Present Reading Date : 15.06.2022  
 Billing Date : 15.06.2022  
 Next Reading Date: 16.08.2022-20.08.2022  
 Connected Load : 3.64 KVA  
 Solar PV Capacity :  
 Meter Reading unit : 11A53QMP  
 PAN of consumer(s) :

Meter No	Time	Previous Reading	Present Reading	MF	Unit consumed	Max Demand (KVA)
BR422354	N	18435.00	18503.00	1.00	68.00	

Breakup of Charges

Category	Total
Energy Charge (Rs.)	435.20
Fixed/Demand Charge (Rs.)	327.60
Meter Rent (Rs.)	45.00
Gross Amount (Rs.)	807.80
Outstanding Amount (Rs.)#	99927.58
Adjustments**	0.00

Payment may be made using RTGS/NEFT in your exclusive a/c no: WBB1025428491984 with 1  
 ICIC0000104

As per order of WBERC dated 30.03.2023 & Subsidy from West Bengal Govt  
 # Outstandings: Rs.99927.58 for JAN2020-MAY2022

Last Payment Details: Amount (Rs.): 7683.00 Payment date : 27.09.2019

Estimated Consumption.

Non-accessibility of consumer premises.

Security Deposit: Rs. 14008.89









## ANALYSIS

There should be regular maintenance schedule of equipment like pumps, exhaust fans and IT equipment. Electronics such as computers, printers, scanners, etc. more than 3 year or 5 years (as per their life) should be replaced with new computers/laptops. Ideal Temperature should be maintained for all electronic appliances.

## AREAS FOR IMPROVEMENT

### Lighting System:

- ✚ All "conventional FTL (46 Watt) should be replaced by energy efficient LED Tube Light fixture (20 Watt). It's Appreciable
- ✚ Installation of "Timer control on street lighting" in college campus recommended for energy saving in the campus.

### Ceiling Fan and Exhaust Fan:

- ✚ Replacement of "conventional ceiling fan 80 Watt" by energy efficient star rated fan or BLDC based energy efficient fan (20 to 25 Watt) in "admin building, class rooms, Auditorium Hall laboratories and faculties cabin" have great potential for energy saving

### Air Conditioning System:

- ✚ It is recommended "Fall Ceiling "in air conditioning area. It will be reduced air conditioning load of AC and unit consumption.
- ✚ Reduced the infiltration from door and window in air conditioning area



### Energy Management Workshop and Training:

- ✦ Develop energy management policies for college. Establish a procurement policy that is energy saving and eco-friendly.
- ✦ Conduct awareness and training programs for faculty, student and non-teaching staffs. Conduct seminars, workshops and exhibitions on energy management education.
- ✦ This policy will be communicated to students, teaching and nonteaching staff through internal communication channels and will be made available to public through college website.

*Supriyo Kayal*

**Mr. S. Kayal**

**Lead Auditor EMS & Energy (EnMS)**

**NBQP(QCI) registered Principal Auditor**

**\*\*\*\*\* END OF THE REPORT \*\*\*\*\***



# Jibantala Rokeya Mahavidyalaya

Jibantala, Canning-II, South 24 Pgs

Pin-743502

## GREEN AUDIT REPORT

ACADEMIC YEAR 2022-23

(Covering Sustainability, Environment, Water, Waste and Energy Management,  
In-line with National Building Code 2016-Part II)



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- ACKNOWLEDGEMENT
- CERTIFICATE
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- INTRODUCTION
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- SUGGESTION AND RECOMMENDATIONS
- CONCLUSION



## ACKNOWLEDGEMENT

Green Audit Team thanks the management of Jibantala Rokeya Mahavidyalaya for assigning this important work of Green Audit. Our special thanks are to:

- Honourable Principal Dr. Anup Maji (Principal)
- Teaching & Supporting Staff of Collage for giving us necessary inputs to carry out this very vital exercise of the audit. We are also thankful to other staff members who were actively involved while collecting the data and conducting field measurements.

The Green audit conducted by the Jibantala Rokeya Mahavidyalaya is an internal audit that aims towards looking after a healthy environment. The initiative is taken up to foster the concept of environmental sustainability. Sincere thanks to all for providing us necessary amenities and co-operation during the audit that helped in making the audit a success.





## OPENING & CLOSING MEETING ATTENDANCE ROSTER

Name of the Institute: **Jibantala Rokeya Mahavidyalaya**

Type of Audit: **GREEN AUDIT**

Date: 26/04/2023

NAME	DESIGNATION	OPENING MEETING Date: 26/04/2023	CLOSING MEETING Date: 26/04/2023
* Auditor /Technical Expert			
SUPRIYO KAYAL	LEAD AUDITOR		

Client			
Dr. Ramkrishna Mandal	Teacher in charge		

\* Declaration for conflict of interest: "I reconfirm that there is no Relationship (as defined in 17021 Clause: 5.2) with the Client that poses any Conflict of Interest and / or unacceptable threat to impartiality. By signing the above attendance, they confirm for the same.






## GREEN AUDIT

### CERTIFICATE

This is to certify that a "GREEN AUDIT" for Jibantala Rokeya Mahavidyalaya, At Jibantala, Canning-II, South 24 Pgs, Pin-743502, West Bengal, has been conducted in April'2023 to assess the green initiatives planning and efforts implemented in the college campus like Green Campus Management, Covering Sustainability, Environment, Water, Waste and Energy Management, in-line with National Building Code 2016-Part II. This green audit is also aimed to assess impact of green initiatives for maintenance of eco-friendly campus.

Place: Jibantala

Date: 26th April'2023



**Mr. S. Kayal**

Lead Auditor EMS & Energy (EnMS)

NBQP(QCI) registered Principal Auditor



## 1. EXECUTIVE SUMMARY

Rapid economic and urbanization development has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institute which will lead for sustainable development.

The purpose of the audit was to ensure that the practices followed in the campus are in accordance with the Green Policy adopted by the institution. The methodology included physical inspection of the campus, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. It works on the several facets of 'Green Campus' including

- **Water Conservation,**
- **Tree Plantation,**
- **Waste Management,**
- **Alternative Energy and**
- **Mapping of Biodiversity.**

With this background, the specific objectives of the audit were to evaluate the adequacy of the management control framework of environment sustainability as well as the degree to which the Departments are in compliance with the applicable regulations, policies and standards. It can make a tremendous impact on student health and learning Institute operational costs and the environment. The criteria, methods and recommendations used in the audit were based on the identified risks.



## 2. INTRODUCTION

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of various establishments. It aims to analyse environmental practices within and outside of the concerned sites, which will have an impact on the eco-friendly ambience. Green audit can be a useful tool for an Institute to determine how and where they are using the most energy or water or resources; the Institute can then consider how to implement changes and make savings. It can also be used to determine the type and volume of waste, which can be used for a recycling project or to improve waste minimization plan. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus, it is imperative that the Institute evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent.

1. Green Audit is a systematic approach, Audit is conducted objectively.
2. Auditor obtains and evaluates evidence.
3. Evidence obtained and evaluated by the auditor concerns assertions about economic actions and events.



4. Auditor ascertains the degree of correspondence between assertions and established criteria.
5. Goal, or objective, of the audit is communicating the results to interested users.

## About the college

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### Mission

The mission of the college is to make, within its limited means, knowledge acquired through higher education reach every deserving school pass out who aspires to take admission to this institution and instill in him/ her a spirit of free inquiry, thereby broadening the scope of higher learning on the one hand, and to help in every possible way students who are needy so that they can carry on and complete their studies and be able to stand on their own feet as responsible citizens on the other.

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## 3. OBJECTIVE OF THE STUDY

The main objectives of the green audit are to promote the environment management and conservation in the Institute campus. The purpose of the audit is to identify. Quantify, describe and prioritize framework of environment sustainability in compliance with the applicable regulations, policies and standards.

Later on, it is implemented as a measure to enhance a healthy environment to almost all the organizations. Through Green Audit, one gets a direction as how to



improve the condition of environment and there are various factors that have determined the growth of carrying out Green Audit. Green audit is assigned to the criteria 7 of NAAC, National Assessment and Accreditation Council which is a self-governing organization of India which declares the institutions as Grade A, B or C according to the scores assigned during the accreditation.

### **The main objectives of carrying out green audit are**

- To aware students to real concern of environment and its sustainability
- To secure the environment and cut down the threats posed to human health
- To establish a baseline data to assess future sustainability by avoiding the interruptions in environment that are more difficult to handle and their corrections requires high cost.
- To bring out a present status report on environmental compliance.

#### **4. METHODOLOGY**

In order to perform green audit, the methodology included different techniques such as physical inspection of the campuses, observation and review of the documentation, interviewing key persons and data analysis, measurements and recommendations. The study covered the following area to summarize the present status of environment management in the campuses

- **Water Management**
- **Air Quality assessment and Management**



- **Electricity consumption and management**
- **Waste Management,**
- **Mapping of Biodiversity.**

The Green Audit taken up by the College had been divided into three stages

## 5. THE PRE-AUDIT STAGE

In the pre-audit stage,

Meetings provide an opportunity to support the capacity and objectives of the audit and enable discussions on the feasibility associated with the audit. The meeting provided the chance to gather information that the audit team can study before arriving on the site. The audit procedure and audit plan were handed over at this meeting and discussed in advance of the audit itself. In JIBANTALA ROKEYA MAHAVIDYALAYA, the planning of audit processes was discussed in the pre-audit meeting. Audit team was also selected in this meeting with the help of staff and the Institute management. The audit protocol and audit plan were handed over at this meeting and discussed in advance of the audit itself. The Management of the Institute has shown the commitment towards the green auditing during the pre-audit meeting. They were ready to encourage all green activities. It was decided to promote all activities that are environment friendly such as awareness programs on the environment, campus planting more trees on the campus, etc., after the green auditing. The management of the Institute was willing to formulate policies based on green auditing report.

## 6. THE AUDIT STAGE

The Audit Stage team selection and the field works performed. Looking after the unique structure, location and ambiance of the Institute, the Green Audit Team focused on Material Issues pertaining to Institute which have the highest influence on the Green Attributes of the Institute. The Audit stage also focused on the



Methodology adopted. Checklist approach is adopted for transparent evaluation of the topics and increase readability for independent reader. Discussions were made with the college management regarding their policies on environmental management.

College and its premises were visited and analysed by the auditor to gather information. Campus trees were counted and identified. library, office rooms and parking grounds were also visited to collect data. Number and type of vehicles used by the stakeholders were observed.

## 7. THE POST AUDIT STAGE

The base of any green audit is that its findings are supported by documents and verifiable information. The audit process seeks, on a sampled basis, to track past actions, activities, events, and procedures to ensure that they are carried out according to systems requirements and in the correct manner. Green audits form a part of a process. Although they are individual events, the real value of green audits is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. Although green audits are carried out using policies, procedures, documented systems and objectives as a test, there is always an element of subjectivity in an audit. The post-audit stage ensures formulation of Draft findings and sent to management response. Since the audit is done internally, it was important to ensure management approval for the draft. After getting draft approval, the audit team went for final report formulation.





## 8. AUDIT GOALS OF THE INSTITUTE

The Institute, has created green monitoring team that aimed at performing the green audit of the institution. The main objectives of the audit are

- More efficient resource management
- To provide for basis for improved sustainability
- To create Green Campus
- To enable waste management through reduction of waste generation, solid waste and water recycling.
- Recognise the cost saving methods through waste minimising and managing.
- Point out the prevailing and fourth coming complications
- Impart environmental education through systematic environmental management approach and benchmarking for environment protection.

## 9. AUDIT FRAMEWORK AND DETAILED FINDINGS

The following audit framework is used for conducting Green Audit. The framework also lists of the findings and observations for every criterion.

Control objective	Control(s)	Audit Observation
<ul style="list-style-type: none"> <li>• <b>WATER MANAGEMENT</b></li> </ul>	<ul style="list-style-type: none"> <li>• Repair sources of water leakage, such as dripping taps.</li> </ul>	<ul style="list-style-type: none"> <li>• Regular checking and maintenance of pipelines are done to control Water wastage.</li> </ul>



<ul style="list-style-type: none"> <li>• Encourage to decrease excess water usage.</li> </ul>	<ul style="list-style-type: none"> <li>• Though water is used nominal in the Institute, but to ensure a further minimal rate, placards and warnings are not set up in the Institute premise. That must be adopted at every water delivery Point.</li> </ul>
<ul style="list-style-type: none"> <li>• Install water recycling mechanism.</li> </ul>	<ul style="list-style-type: none"> <li>• Rain water of 3000 sq. feet has been stored, reused and recharge the found level water.</li> </ul>
<ul style="list-style-type: none"> <li>• Minimize wastage of water and use of electricity during water filtration process, if used, such as Aqua guard filter</li> </ul>	<ul style="list-style-type: none"> <li>• Institute has Aqua guard filter on each floor which gives safe drinking water. Also packaged drinking water using when necessary.</li> </ul>
<ul style="list-style-type: none"> <li>• Rainwater Harvesting project execution</li> </ul>	<ul style="list-style-type: none"> <li>• Already executed. They collect the rainwater from the roof and stored in tank (which is used in toilets, gardening) and excess rainwater is recharged at the ground through well.</li> </ul>
<ul style="list-style-type: none"> <li>• Make full use of all recycling facilities</li> </ul>	<ul style="list-style-type: none"> <li>• Institute does not have any such recycling device to carry on the procedure. Primary segregation is carried out and partly paper, plastic and E waste is kept in E-waste bin.</li> </ul>



<ul style="list-style-type: none"> <li>Waste, green waste and non-recycled collected from gardens, offices and rooms.</li> </ul>	<ul style="list-style-type: none"> <li>Taken by Panchayet.</li> </ul>
<ul style="list-style-type: none"> <li>Recycle or safely dispose of dry wastes, computers and electrical appliances.</li> </ul>	<ul style="list-style-type: none"> <li>Recycle or safely dispose of dry wastes, computers and electrical appliances is done at primary level is done.</li> </ul>
<ul style="list-style-type: none"> <li>Provide sufficient, accessible and well-publicized collection points for recyclable waste, with responsibility for recycling clearly allocated</li> </ul>	<ul style="list-style-type: none"> <li>The Institute has set up separate two bins on each floor to ensure proper segregation and collection of the various wastes.</li> </ul>
<ul style="list-style-type: none"> <li>Dispose all waste, whether solid or otherwise, in a scientific manner and ensure that it is not released directly to the environment</li> </ul>	<ul style="list-style-type: none"> <li>Yes, the Institute is trying to dispose all wastes, whether solid or otherwise, in a scientific manner and ensure that it is not released directly to the environment; however, there is a lot of scope for improvement in current waste handling methods.</li> </ul>



<ul style="list-style-type: none"> <li><b>GREEN CAMPUS</b></li> </ul>	<ul style="list-style-type: none"> <li>Encourage the faculties and students to plant trees in the garden.</li> </ul>	<ul style="list-style-type: none"> <li>Encourage the faculties and students to plant trees in the garden. Existing plantation is not marked properly. However, more plantation can be adopted with more native trees.</li> </ul>
	<ul style="list-style-type: none"> <li>Establish a Garden in the campus</li> </ul>	<ul style="list-style-type: none"> <li>Institute planning for garden.</li> </ul>
	<ul style="list-style-type: none"> <li>Disposal of the chemical waste generated from the laboratories in a scientific manner</li> </ul>	<ul style="list-style-type: none"> <li>NA</li> </ul>
	<ul style="list-style-type: none"> <li>Minimize the use of fertilizers and Pesticides in Institute ground &amp; garden.</li> </ul>	<ul style="list-style-type: none"> <li>Moderate amounts of bio-fertilizers are used in the Institute.</li> </ul>
<ul style="list-style-type: none"> <li><b>ENERGY MANAGEMENT</b></li> </ul>	<ul style="list-style-type: none"> <li>Look in to the possibility of on-site micro-generation of renewable electricity.</li> </ul>	<ul style="list-style-type: none"> <li>Institute has started to installed Solar wall Lights for outdoor and garden.</li> </ul>
	<ul style="list-style-type: none"> <li>Give preference to the most energy efficient and environmentally sound appliances available, this includes only using energy-saving light bulbs</li> </ul>	<ul style="list-style-type: none"> <li>The Institute is using LED lights as much as practicable as well as CFL. College using fan and LED tube, Xerox machine, Computer printer, CC tv etc. 90% Bulbs are LED tubes., AC 1 nos and computer 15 nos. verified during audit.</li> </ul>
	<ul style="list-style-type: none"> <li>Ensure that all cleaning products used by Institute staff have a minimal detrimental impact on the environment, i.e. are biodegradable and non-toxic</li> </ul>	<ul style="list-style-type: none"> <li>Negligible amounts of washing liquids are used in the Institute and all the toilet cleaners are eco-friendly</li> </ul>

**Green Campus:**

Total number of plants in the campus- 76 numbers



**Water Management**

The source of water used in the college are municipal water supply.

Sl. No.	Parameters	Response
1	No of wells	2
2	No of water tanks	3
3	Any wastage/why	Nil
4	Water used for gardening	5 cu.mt.
5	Waste water sources	washrooms
6	Rain water harvest available?	Yes
7	Any leaky taps?	Nil
8	Amount of water lost per day	Nil



## Waste management

Waste management is important for an eco-friendly campus. In a college, different types of wastes are generated, its collection and management are very challenging. The following data provide the details of the waste generated and the disposal method adopted by the college.

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	E waste is kept in E-waste bin.
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc.	Pick up by Panchayet
Solid wastes	Damaged furniture, paper waste, paper plates	Pick up by Panchayet
Waste water	Washing, urinals, bathrooms	Panchayet sewer line
Food waste	Food waste from canteen	Pick up by Panchayet





## 11. SUGGESTIONS AND RECOMMENDATIONS

A few recommendations are added to curb the menace of all management using eco-friendly and scientific techniques. This may lead to the prosperous future in context of green campus and thus sustainable environment and community development. It has been shown frequently that the practical suggestions, alternatives, and observations that have resulted from audits have added positive value to management of the campus.

### CRITERIA WISE RECOMMENDATIONS

#### Green Campus

- All trees in the campus should be named scientifically and name should be placed on each tree.
- Beautify the college building with indoor plants.
- Encouraging students for making the campus green.
- Conducting competitions among departments for making students, teaching-non teaching staffs more interested in making the campus greener.

- In order to increase the carbon credit and greenery of the campus, it is recommended to plant more indigenous and Fruit and medicinal plants species inside the campus like Amla, Kaju, Tulsi, Alovera and Ashwagandha etc.

### Water management

- The college should arrange awareness programs for water conservation. The campaign should be on proper monitoring of water consumption patterns in the campus and can also conduct water quality monitoring during specific intervals.

### Energy management

- The energy audit recommends to avoid the use of more energy consuming electrical appliances and to replace with more environment friendly and energy efficient appliances (for example five stars rated Air conditioner) in the college. The potential of renewable energy sources has to be explored. As the college has a very large roof area for installing solar panels so that it can be effectively used for generating power.
- It is recommended to install the following solar powered appliances in the campus;
- Solar powered street lights and LED display board.
- Observe a power saving day every year
- Conduct more save energy awareness programs for students and staff.
- Use energy efficient light-emitting diode (LED) bulbs instead of incandescent and CFL bulbs
- Maintain appliances and replace old appliances. • Use computers and electronic equipment in power saving mode.





### Waste management

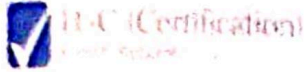
- Try to avoid the use of plastic in the campus, and to encourage the use of biodegradable materials as alternatives. Ban on single use plastic such as carry bags, food packaging, bottles, straws, containers, cups and cutlery. Instead use steel plates. Avoid using paper cups and plate too.
- Leaf litter from the campus can be effectively used for aerobic/ vermi-composting, so that the composted material can also be used as good manure.
- Practice of waste segregation to be initiated.

### Carbon footprint

- Increase a system of car-pooling among the staff to reduce the number of four wheelers coming to the college.
- Encourage students and staff member to use public transport as possible.
- College may set a day as “no own vehicle day” every month. The any day of every month must be dedicated for it. Teachers and students are not allowed to take their private vehicles on that day and are supposed to reach college via public transportation methods. The no own vehicle day is widely accepted among students and teachers and is hugely appreciated by the community.
- College also can promote car and bike pooling system. Teachers/ students coming from the same area share their vehicles to reach the college. This also reduces the number of private vehicles used in the college campus
- PUC (Pollution under control) certificate is required for all vehicles in the parking area.

## 12. CONCLUSION





The green audit assists in the process of testing performance in the environmental arena and is fast becoming an indispensable aid to decision making in a college. The green audit reports assist in the process of attaining an eco-friendly approach to the sustainable development of the college. A green audit report is a very powerful and valuable communications tool to use when working with various students who need to be convinced that things are running smoothly and systems and procedures are coping with natural changes and modifications that occur. The audit has identified several observations for making the campus premise more environment friendly. The recommendations are also mentioned with observations for campus team to initiate action. The audit team opines that the overall site is maintained well from environmental perspective, certain changes if implemented the college will be benefited by various environmental ways. **The audit was conducted to check following aspects**

- More efficient resource management.
- Provide basis for improved sustainability.
- Creating a green campus.
- Enable waste management through reduction of waste generation, solid- waste and water recycling
- Recognition of the cost saving methods through waste minimizing and managing.
- Point out the prevailing and forthcoming complications.
- Impart environmental education through systematic environmental management approach and Benchmarking for environmental protection.

Allow targets are fairly achieved in executed green audit report.

*S. Kayal*      *Supriyo Kayal*

**Mr. S. Kayal**

**Lead Auditor EMS & Energy (EnMS)**

**NBQP(QCI) registered Principal Auditor**

End of Report

