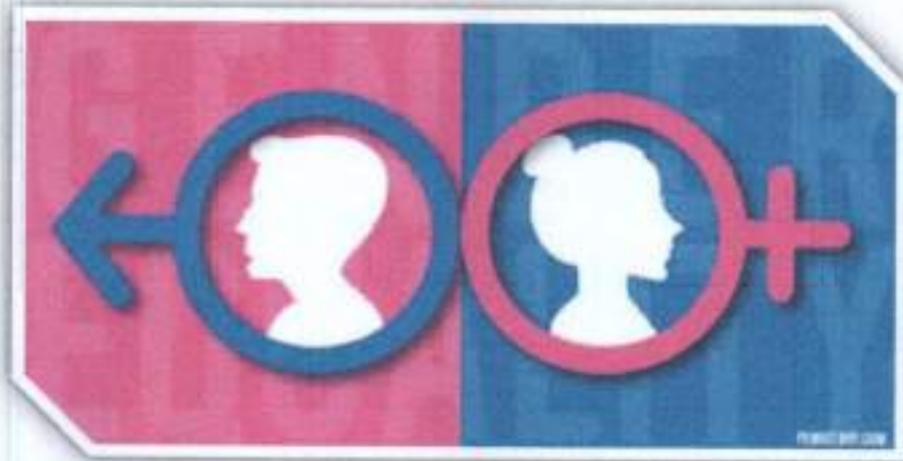




**PATTAMUNDAI COLLEGE, PATTAMUNDAI**



**GENDER AUDIT REPORT  
2020-2021**

**Prepared By**

**Internal Quality Assurance Cell (IQAC),  
Women Development Cell (WDC) &  
Gender Audit Committee  
Pattamundai College, Pattamundai  
Kendrapara, Odisha 754215**

## PREFACE

**Achieving gender equality requires the engagement of women and men, girls and boys. It is everyone's responsibility.**

The college has set up Women Development Cell (WDC) from the very inception onwards, to ensure gender equity among the students in the campus and to make them aware of the relevance of gender equity in the society. The Cell always motivates the students to perform their social responsibilities and to empower them. WDC has conducted different programs to boost the strength and capabilities of women students. Not just girls, but also boys too are included and educated. Women Development Cell in the campus is providing a platform for listening to complaints, quick redressal of grievances and sensitizing female students on gender issues. All grievances shall be treated with absolute confidentiality through the setting up of a sexual harassment redressal committee.

Women Development Cell, IQAC & Gender Audit Committee conducted a Gender Audit of the college for the year 2020-21, as it is an essential component for the assessment and accreditation of Higher Educational Institutions suggested by UGC. The team conducted the survey among the students of the college for the academic year 2020-21 and they scrutinized and reviewed the operating environment of college too.

### **Objectives of Gender Audit**

- To find out the areas where gender balance exists and the factors behind the gender balance.
- To establish good gender balance in decision-making processes 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 at the college

### **About the College:-**

Pattamundai College, Pattamundai a premiere educational institute in the state of Odisha and the second largest of Kendrapara district, is registered under the Societies Registration Act, 1960 on 5th July, 1970. The college was recognized by the Department of Higher Education, Govt. of Odisha by an order no 18018/E, dated 01.06.1970 and permanently affiliated to Utkal University, Bhubaneswar vide order no53325, dated 05.08.1972

The college is recognized by UGC, under 2(f) and 12B and accredited Grade-'B' by NAAC. The college has faculties of Arts, Commerce and Science on aided basis and offers undergraduate courses with Honours/major subjects in Arts, Commerce and Science to enable students to have a prospering careers and improve knowledge and skills to thrive and develop their personality.

We not only aim at achieving academic excellence but also want to inculcate value based education, physical training/self-defence training for girls, sports and cultural activities and mental well-being in our students.

### **Vision:-**

- To make higher education qualitative and value based for the socio-economic transformation of the nation.
- To instil a sense of discipline and morality among the student's community for the making the students socially responsible citizens.

### **Mission:-**

- To grow into an institution of excellence and exemplary at the university level
- To provide literary, scientific, professional and technical education to the aspiring rural youth at a minimum cost.
- To be recognized as an institution with proven capacity to provide quality education in Science, Commerce & Humanities.
- To create symbiotic relationship with the society to meet the changing needs
- To introduce self-financing courses in multidisciplinary area.
- To adopt continues measures to improve the quality of the programme.
- To provide need-based career-oriented courses to the needs of the society
- To involve the Alumni for all round development of the college

## **METHODOLOGY:-**

The Gender Audit was organized on four different dimensions like; Gender Analysis of students, Gender Analysis of Teaching Faculty, Gender Analysis of Non-teaching Faculty and Gender analysis of Institutional Policy and Provision. A common format for collecting baseline data was prepared and was distributed to all participants concerned in the process of Gender Audit. (Refer Annexure-1). In order to meet its Objectives, this audit combined physical inspection with a review of relevant documentations and personal interviews with various stakeholders. The audit process involves collection of data, analysing policies/programmes and data to access the extent of gender equality and balance.

## **GENDER SENSITIVE FEATURES IN COLLEGE:-**

**The college ensures the safety of the college students** for which handful numbers of CCTV are installed in Class rooms, Library, Administrative building, Hostel, Portico areas and two numbers of Security guards and one Night-watchman are employed by the colleges. To ensure the safety measures of girls students, a girls common room with adequate place, sufficient numbers of chairs, water purifier, clean and safe toilets with access to water and garbage disposal and a lady attendant have been provided to address the needs of all adolescent girls.

**Counselling of Students** is done whenever required by teachers and professional counsellor. 'Mentor-Mentee' system has been introduced. Mentors motivate students to approach them for help and support of all kinds.

**Women Harassment and Anti-sexual Harassment** cell have been established to provide a healthy and congenial atmosphere and to resolve issues to develop non- threatening and non-intimidating atmosphere of mutual learning among all the girls.

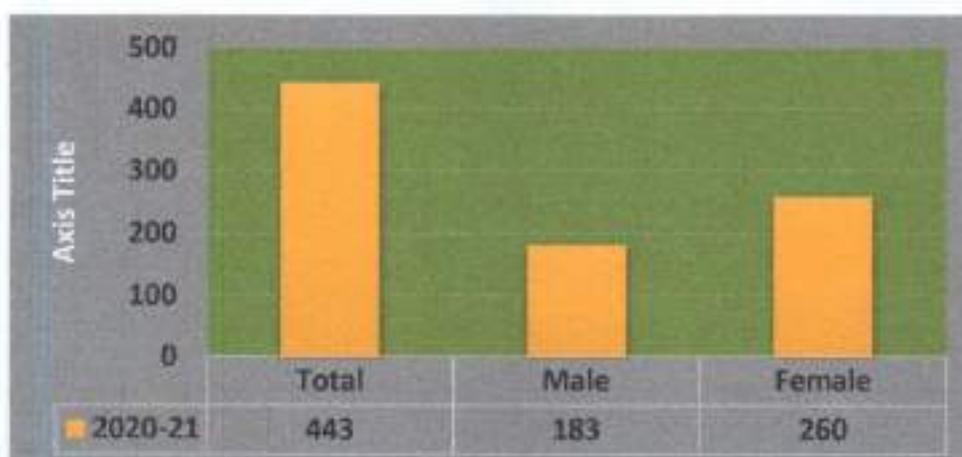
**Anti-ragging cell** has been constituted by the college which aims to keep a vigil and stop the incidence of ragging to ensure zero tolerance for ragging. The officials of the cell make regular inspection in the prominent places of the college and hostels to make the campus a ragging-free zone.

## ANALYSIS AND INTERPRETATION:-

### Data Analysis

**Table 1: Gender wise Details of Total Students in the College**

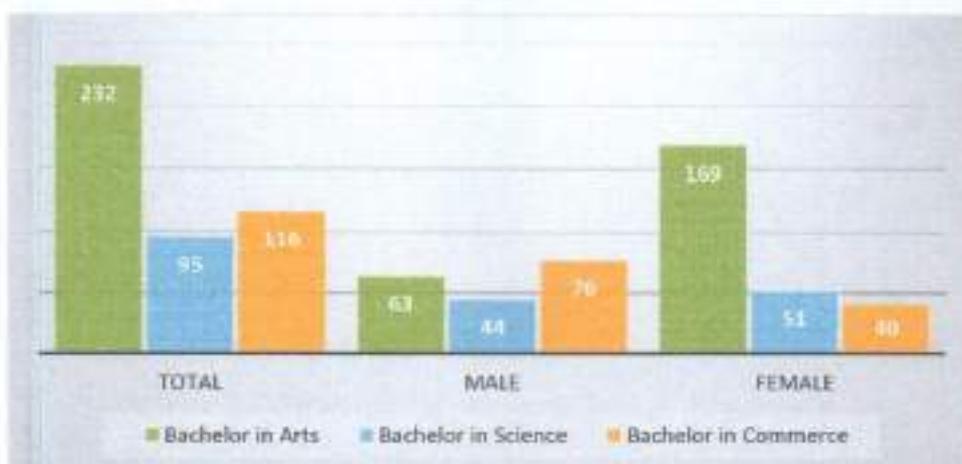
Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	443	183	260	41.31 %	58.69 %



The table shows year-wise gender classification of male and female strength of students and the total number of admissions to the college. It shows that the number of female students is higher, compared to male students.

**Table 2: Gender wise Details of Total Students in programme wise.**

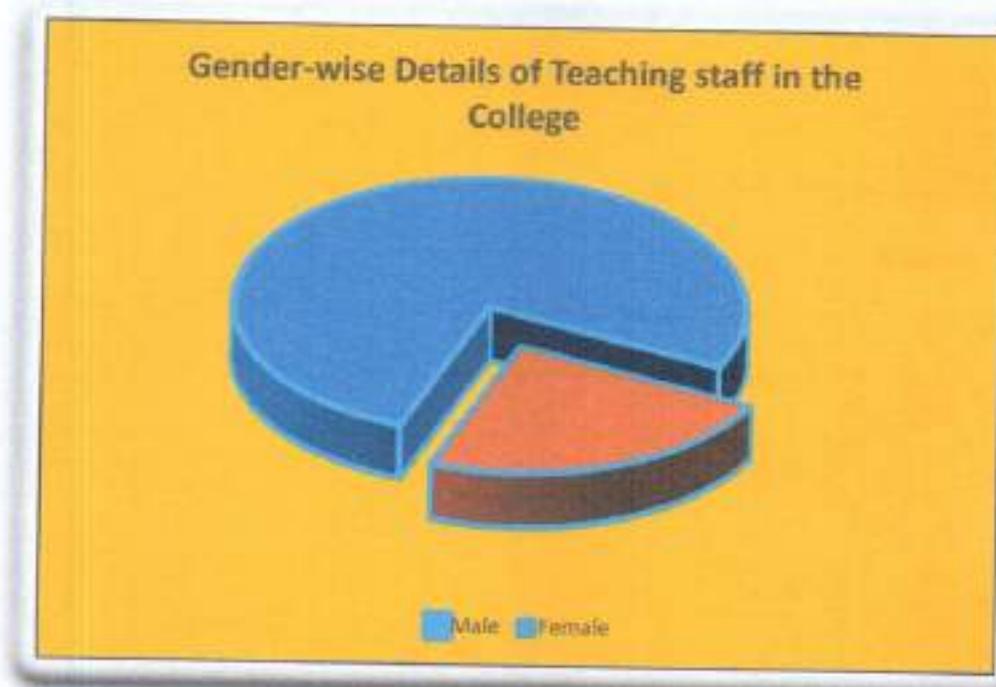
Sl. No	Name of the Programme	Total	Male	Female	Male Percentage	Female Percentage
1	Bachelor in Arts	232	63	169	27.16	72.84
2	Bachelor in Science	95	44	51	46.32	53.68
3	Bachelor in Commerce	116	76	40	65.52	34.48



The table shows gender classification of male and female strength of students of different programs i.e. BA, BSc & B.Com and the total number of admissions to the different program. It shows that the percentage of female students is higher, as compared to male students in the BA and BSc programs. But in the B.Com program shows that the percentage of female students is lower, as compared to the male students.

**Table 3: Gender-wise Details of Teaching staff in the College.**

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	43	33	10	76.74	23.26

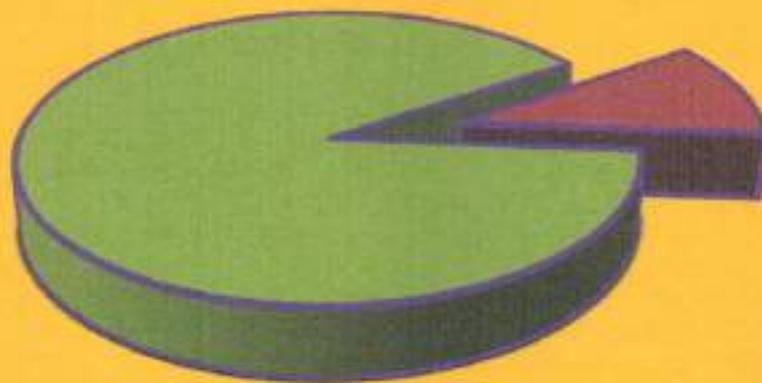


The table shows gender-wise classification of teaching staff in the College. It shows that the number of male teacher is higher, as compared to female teacher. The total 43 faculties, the male teachers had 76.74% (33 no) of share while the female faculties comprised of 23.26% (10 no).

**Table 4: Gender-wise Details of Non-Teaching staff in the College**

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	37	33	04	89.19	10.81

### Gender-wise Details of Non-Teaching staff in the College



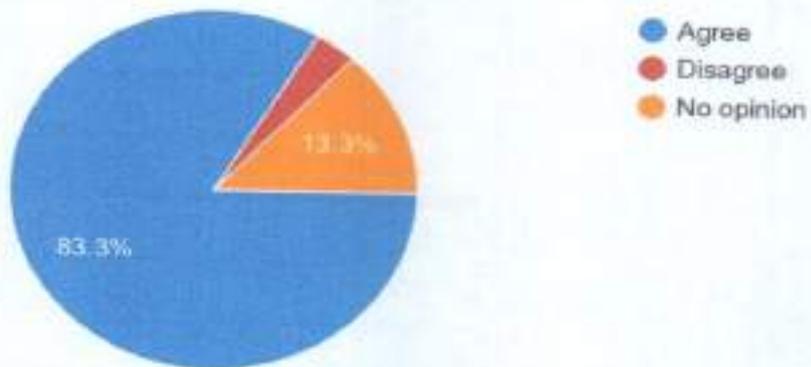
■ Male ■ Female ■ ■

#### Data Analysis and Interpretation

A structured google form questionnaire was developed and used for the collection of data. The questionnaire contains various gender-related questions and the data was collected among the 90 UG students on the campus. Link of google form link <https://forms.gle/tFwWvbY47bAiDfCZA>. The collected data were tabulated and analyzed with the help of Microsoft Excel the statistical technique Mean used for the analysis of data. The graphical representation of analyzed data is given below.

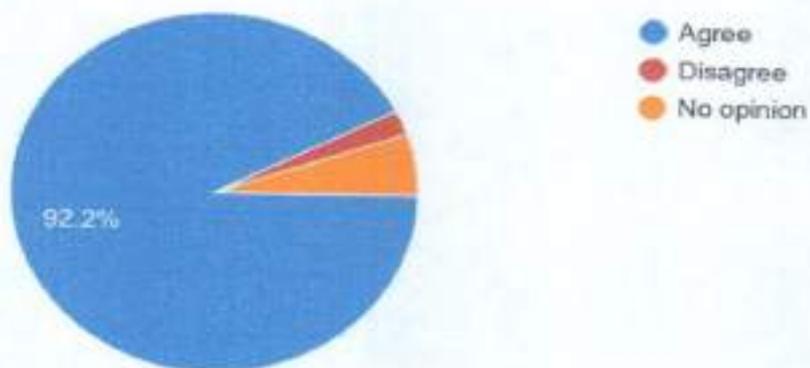
1. Adequate security arrangements have been made in the campus / Hostel and common areas during day and night.

90 responses



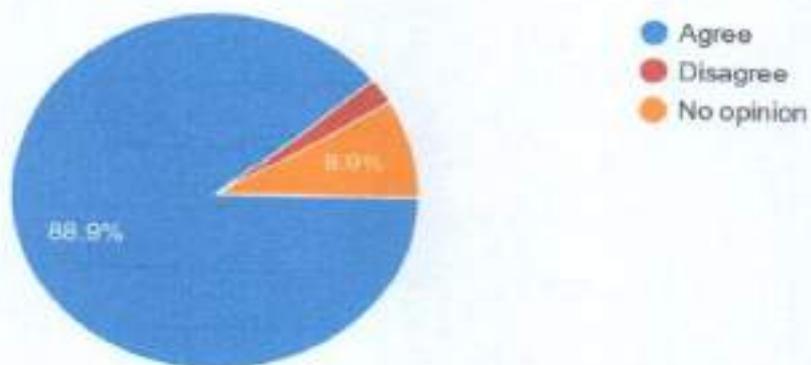
2. A Women Cell is set up in the college and students are aware about the Women Cell.

90 responses



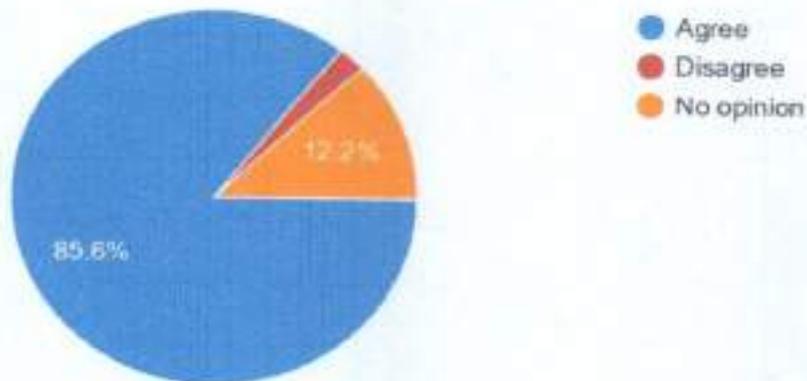
3. There are lady faculties available in the Women Cell.

90 responses



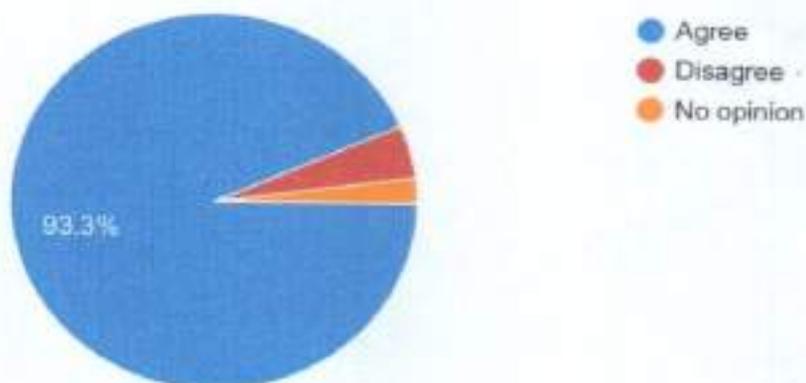
4. A grievance redressal cell has been set up.

90 responses



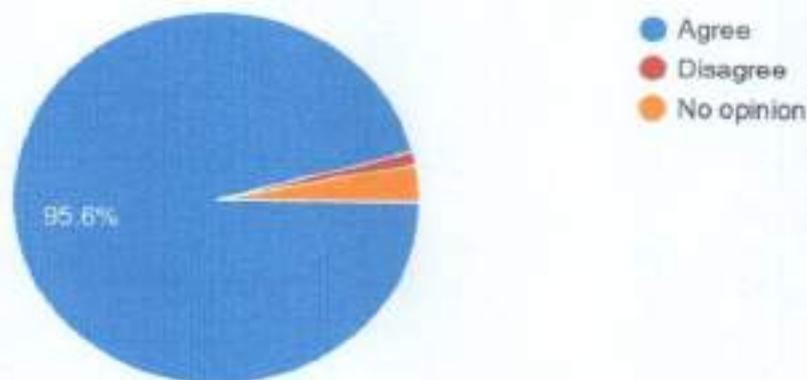
5. The classroom offers equal opportunities to all genders.

90 responses



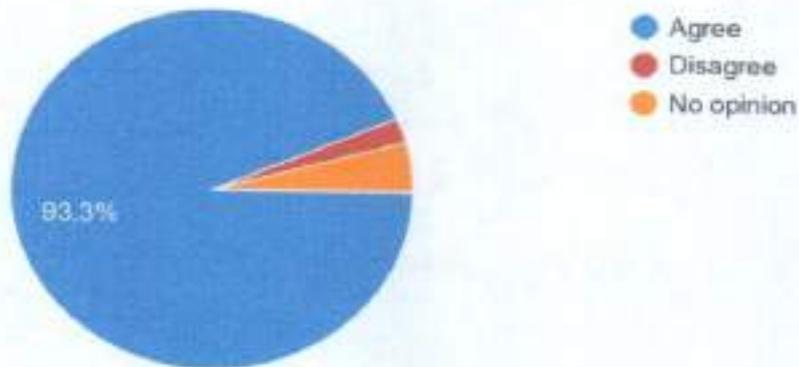
6. The library offers equal opportunities to all genders.

90 responses



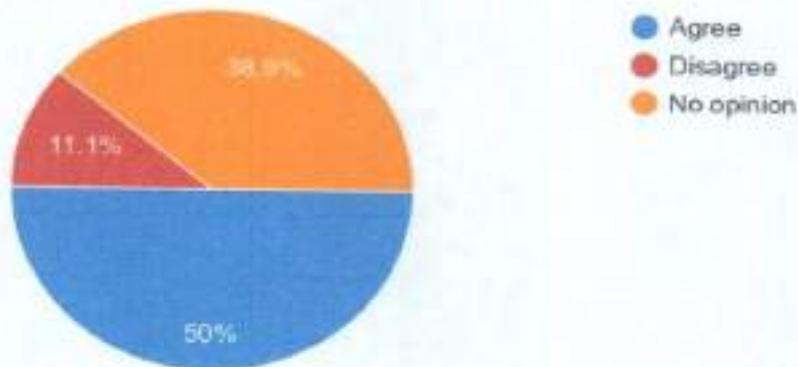
7. Safe environment is available for all girl students in the campus.

90 responses



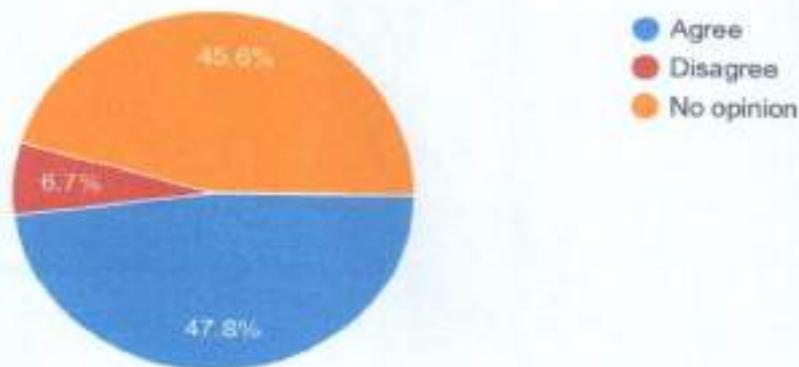
8. A committee has been set up to redress all complaints related to sexual harassment in a timely manner. You are aware about the process and believe that the process is appropriate.

90 responses



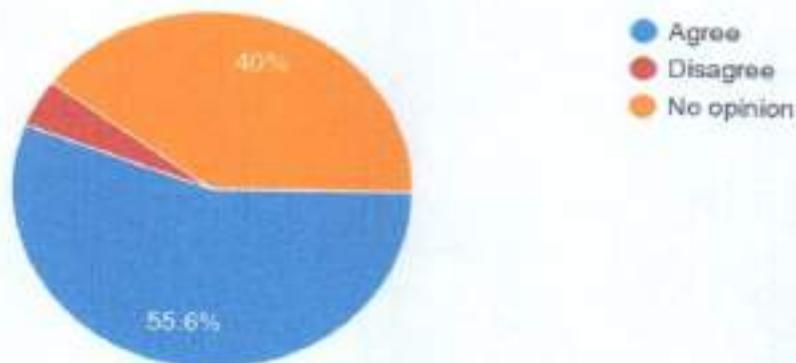
9. A fair inquiry is conducted by the committee, in case of a complaint.

90 responses



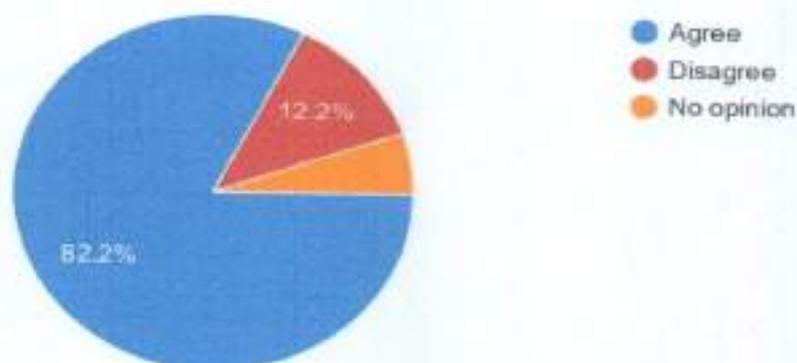
10. Confidentially is maintained during the inquiry process.

90 responses



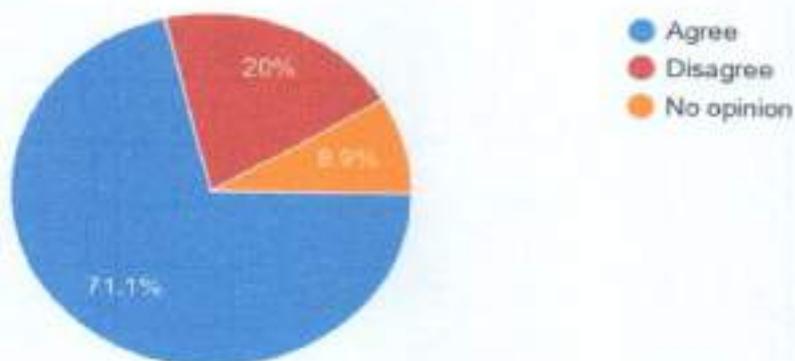
11. Adequate number of toilets are available in the college/ hostel for girls.

90 responses



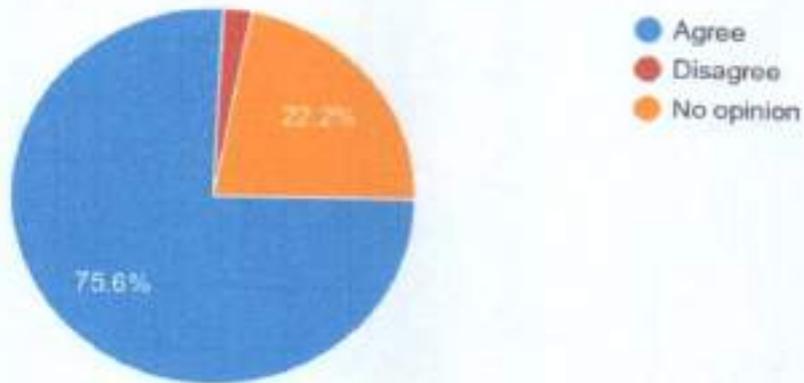
12. Adequate facilities are available inside the toilet keeping in mind the need of the girl students.

90 responses



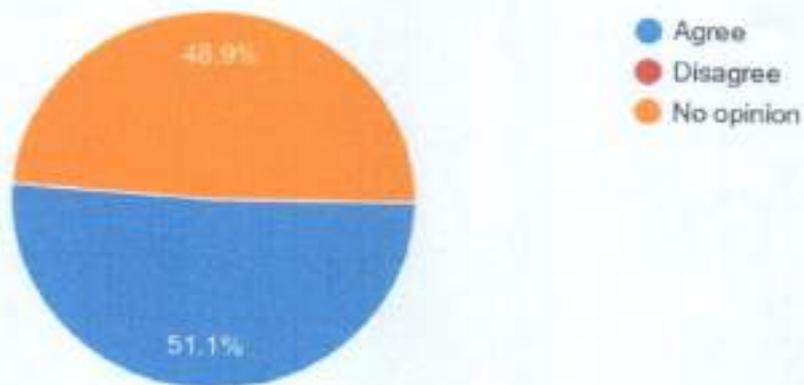
13. Adequate lighting is available inside the Campus/ hostel during night.

90 responses



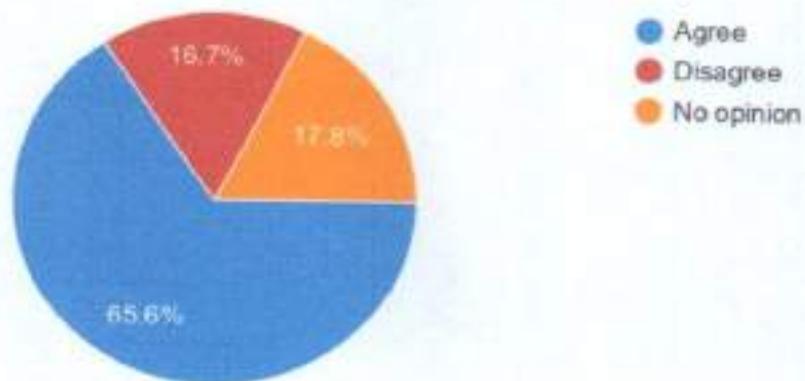
14. Entry and exit timing of the College / hostel are appropriate.

90 responses



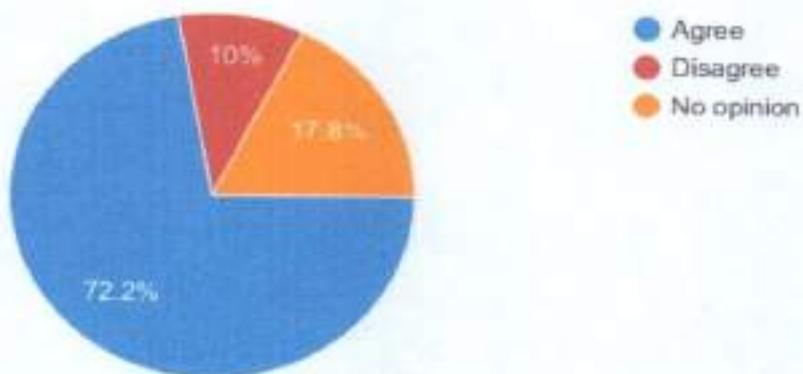
15. Healthcare facilities are available to girl students in the campus.

90 responses



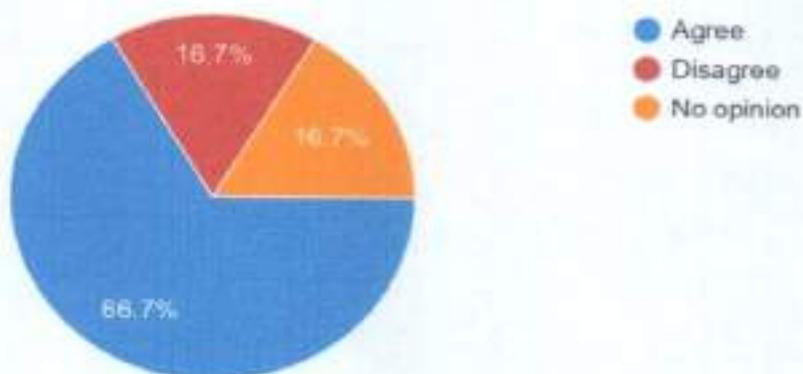
16. Adequate number of security personnel are deployed.

90 responses



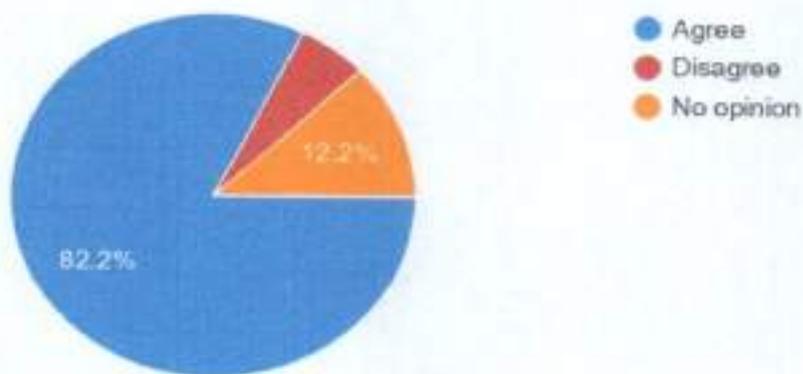
17. Attitude of security personnel is Appropriate.

90 responses



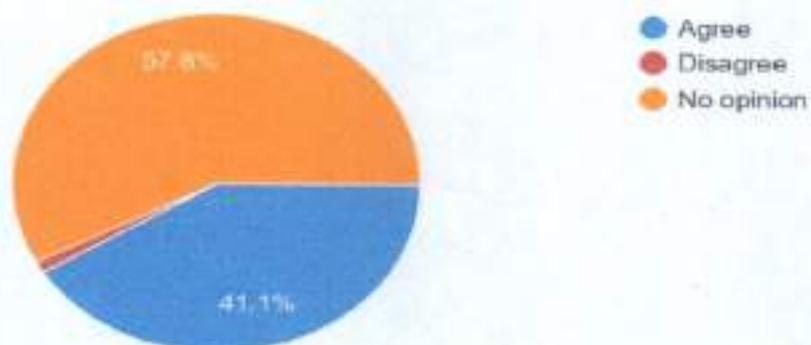
18. Gender sensitization program must be conducted for security personnel deployed at the campus.

90 responses



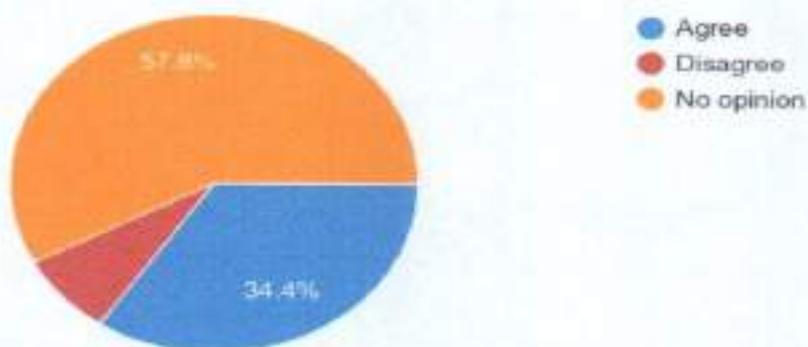
19. Laboratory infrastructure is appropriate for safety of girl students, for example, there is adequate lighting, adequate space provided in the corridors and other areas.

90 responses



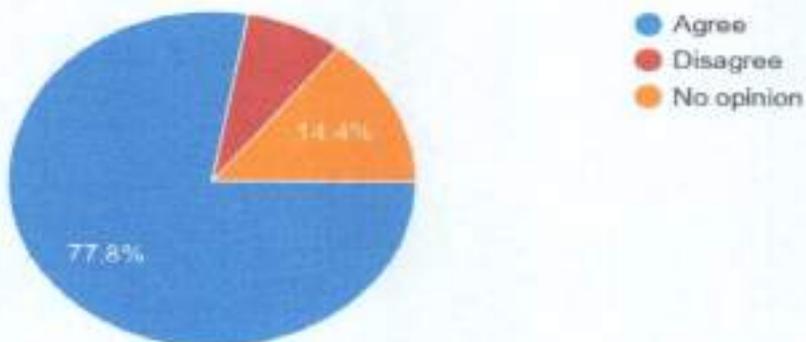
20. Attitude of laboratory staff is Appropriate.

90 responses



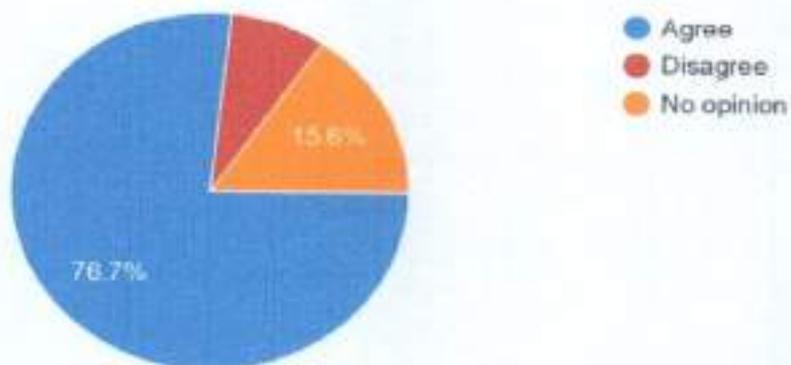
21. There are no gender biased artefacts, such as discriminative screen savers, or work table that are not conveniently located for the girl students.

90 responses



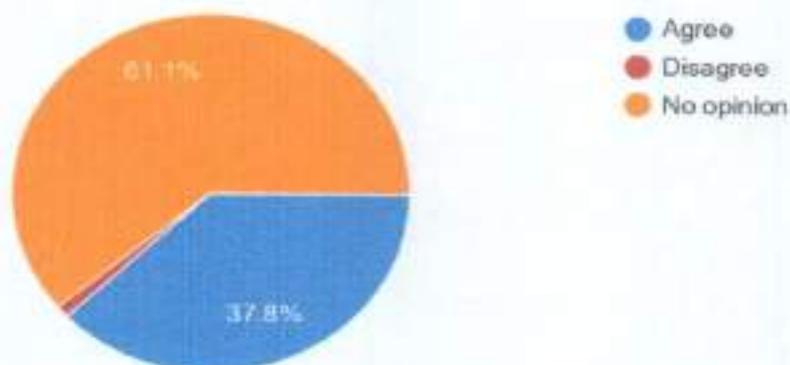
22. There are no gender biased artefacts, such as discriminative screen savers, or work table that are not conveniently located for the girl students.

90 responses



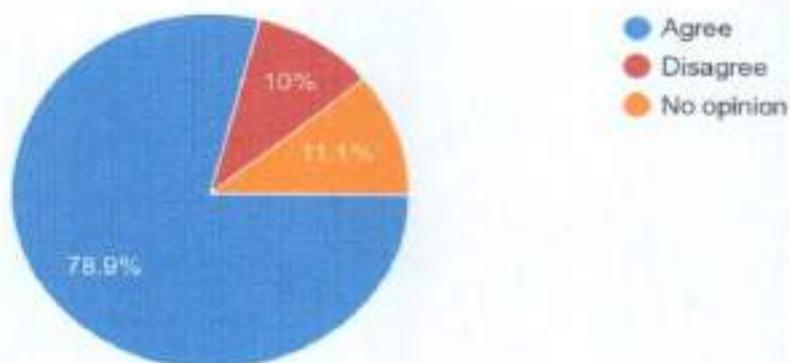
23. Timing of the laboratory is appropriate.

90 responses



24. There is a separate queue for girls in dining hall, office etc.

90 responses



The following table shows some of the gender related activities organized by the different committee and cell of Pattamndai College, Pattamundai.

Sl. No	Organising Unit/Department/Committee/Cell	Topic	Date	Theme
01	Sociology	Social Movement of Women in India	18/09/2020	Gender Sensitisation
02	Sociology	Sociology of Gender: Issues Perspectives and Challenges	20/10/2020	Gender Sensitisation
03	English	Sexual Abuse and Domestic Violence Against Indian women in Literature and Society	15/11/2020	Gender Sensitisation
04	Cultural Association	Essay (English)	05/04/2021	Gender Sensitisation
05	Cultural Association	Essay (Odia)	05/04/2021	Gender Sensitisation
06	Cultural Association	Debate (English)	07/04/2021	Gender Sensitisation
07	Cultural Association	Debate (Odia)	07/04/2021	Gender Sensitisation
08	Cultural Association	Drawing	08/04/2021	Gender Sensitisation
09	Cultural Association	Rangoli	07/04/2021	Gender Sensitisation
10	Girl's Unit (NSS)	AIDS Awareness Day	01/12/2020	AIDS Awareness

#### Findings of Audit Team:-

- Students strength particularly girl's strength is high in both arts and science UG level programmes.
- Girl's enrolment is more than that of boys in most of the programme.
- Success rate of girl students is higher than that of boys.
- The participation of girls in cultural activities is higher than boys
- In sports the participation of boys is more than that of girls.
- In regular teaching staff the strength of males are higher than female.
- It seems sizable percentage of the girls are not aware about presence of anti-sexual harassment cell.
- The equal opportunity to all genders to work with various forums.
- The institution organizes self-defense program for girl students every year.
- The equal opportunity to all genders for free and fair expression of ideas

- Both Teaching Nonteaching staff have a higher male than female.
- Opening of girls unit of NCC in 2020-21 is a measure step towards gender based empowerment.

#### **Suggestions made:-**

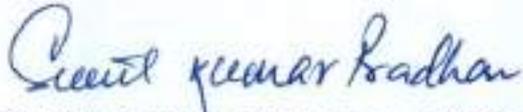
- Define and deepen the understanding of gender equality concepts such as gender equity, empowerment of women, men and masculinities.
- The number of female staff to decision making bodies may be increased
- Organize more sports programs on a regular basis for girl students.
- More awareness program on Legal rights of women.
- College intends to introduce self-employment trainings in different subjects.
- Awareness program to aware the girls about s of anti-sexual harassment cell.
- Opening of women study Centre in the college.

#### **Conclusion:-**

The analysis shows that gender equity goals and objective are included in all the policies, programmes of the college and staff also reported that they have no problems related to gender criterion.

- Gender Audit Team analyzed that the gender equality and gender sensitivity is encouraged by management and staff of the college and they do have gender sensitive behavior.
- It is found that the College has lots of strengths and some weaknesses.
- The weaknesses can be overcome with gradual changes in value set up.
- Doubtless, the enrolment of girls from all section of society is increasing and there is no gender issues complaints.
- With the strong will power and commitment to gender justice, the College would certainly make a mark in the state.
- Gender equality/justice/sensitivity should be moto of the college.

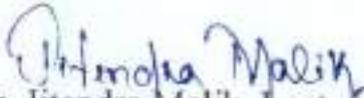
  
Principal 20.6.22  
Pattamundai College



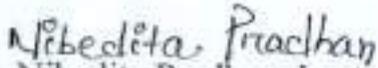
❖ Dr. Sunil Kumar Pradhan , IQAC Co-ordinator



❖ Capt. Manoj Parida, Reader in Sociology



❖ Mr. Jitendra Malik, Lecturer in Commerce



❖ Dr. Nibedita Pradhan, Lecturer in Political Science

## PRE-GENDER AUDIT MEETING

Internal Quality Assurance Cell (IQAC), Gender Audit Committee and Women development Cell (WDC) with Principal of Pattamundai College, Pattamundai.



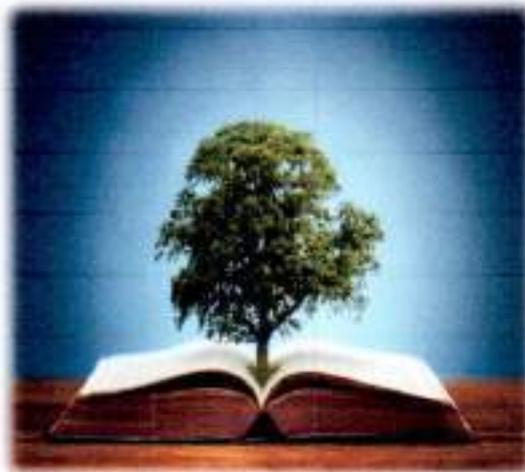
## POST-GENDER AUDIT MEETING

Internal Quality Assurance Cell (IQAC), Gender Audit Committee and Women development Cell (WDC) with Principal of Pattamundai College, Pattamundai.





## **PATTAMUNDAI COLLEGE, PATTAMUNDAI**



### **GREEN AUDIT REPORT**

**2020-2021**

Prepared By

**Internal Quality Assurance Cell (IQAC),**

**&**

**Green Audit Committee**

**PATTAMUNDAI COLLEGE, PATTAMUNDAI  
KENDRAPARA, ODISHA 754215**



# PATTAMUNDAI COLLEGE

**NAAC ACCREDITED B GRADE**

PATTAMUNDAI, KENDRAPARA, ODISHA - 754215

Ref No. : 715.....

Date: 13.7.2022.....

To,

The DFO  
Mangrove Forest Division (WL), Rajnagar.

Sub:- Submission of Green Audit Report for the academic Session 2020-21 for your kind Approval.

Esteemed Sir,

I have the honour to draw your kind attention to the fact that the **Green Audit Report of this noble institution for the academic Session 2020-21 is submitted to your good office for necessary approval.** As per the guide lines laid down by National assessment and Accreditation Council (NAAC) the Green Audit Report will be uploaded in each and every academic session which stream lines the teaching learning and evaluation process in HEIs more flexible. It is pertinent to mention here that a Pre Green Audit Assessment has already been conducted by Sri Bijaya Kumar Patra Range officer along with the Forest Guard Sri Trideep Kumar Patra in association with the members of the green audit committee and IQAC -on 02.07.2022

Therefore, I request your good self to approve the Green Audit Report of this College which will be uploaded in the NAAC- Website on or before 20<sup>th</sup> July-2022.

With Regards.

  
(Prof. Prabhakar Rout)  
Principal  
Pattamundai College

## EXECUTIVE SUMMARY

Educational institutions are the nursing grounds for the futures of a nation's growth. A conducive learning atmosphere in an educational institution requires a clean and healthy environment. While the concept of 'Eco Club' is being adopted in institutions of primary education level to imbibe the essence of environment among the young, more environmental responsibility is required in case of institutions of higher education to achieve environmental sustainability through wise resource utilization and waste discharge to the environment. Waste minimization plan and sustainable environmental management are now mandatory for educational institutions. Environmental Auditing or Green Auditing is a process to test the environmental performance of an organization against its environmental policies and objectives.

The audit process in Pattamundai College, Pattamundai involved initial interactions with the management to clarify policies, activities, records and cooperation of staff and students in the implementation of mitigation measures. This was followed by collection of data through questionnaire, review of records, observation of practices and observable outcomes. In order to assess the quality of water and soil, data on water and soil quality was obtained by testing of samples collected from different locations of the college campus by testing laboratories. In addition, the approach ensured that the management, staff and students are active participants in the green auditing process in the college.

This is the first Green Audit of Pattamundai College and the baseline data prepared for the college will be a useful tool for campus greening, resource management, planning of future projects, and a document for implementation of sustainable development of the college. It is expected that the management will be committed to implement the green audit recommendations.

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## **BRIEF BACKGROUND OF THE COLLEGE**

Pattamundai College, affiliated to Utkal University, Odisha, is situated away from the din and bustle of the town with five meadows and rich corn fields around. It came into being in 1970 as an Arts College with the provision for teaching pre-University Humanities course. The institute at present is a family of 1475 students with boys and girls of 869 and 606 respectively taking education at under graduate level in Arts, Commerce and Science disciplines with 80 numbers of teaching and non-teaching faculties.

With a long history of 50 years and a picturesque sprawling campus of 14.6 acres land of its own is indeed a testimony of truly materialized dream of education lovers of Pattamundai. Since fifty springs has been passed, this institution continuously ventilating knowledge and has been playing a pivotal role in the development of Pattamundai and its surrounding regions. With the modest strength of 128 students in the year of its inception-1970, besides all odds and constraints the college grew manifold in leaps and bounds. It is carefully nurtured by illustrious academicians, administrators, dedicated faculties and alumni, with institutionalised efforts over the years, and it has become a premiere institution in the academic map of Odisha.

In its onward march, the institution cradled with one faculty in Arts in 1970, and introduced Honours in Political Science, History, Economics in 1978 and English, Odia, Sociology, Philosophy & Education in 1989. Then Commerce faculty was opened in 1979 and Science faculty in 1989 with introduction of Chemistry and Mathematics Honours in 1994-94 and Botany, Physics and Zoology Honours in 1998 added to its glory. The University was pleased to open a vocational subject of Tourism and Travel Management in 1998 which illuminated as land mark in development and expansion of the academic area of the college. The college has a permanent affiliation and has been listed under 2(f) and 12(B) of the UGC act which withstands the academic and administrative standards of the college. In response to the changing needs of the society and as per UGC norms innovative experiments are being carried out with help

of computer networking for making the teaching learning process interactive and participative.

With the need of the time, the institution expanded its area of innovation in different respects to meet the requirement of the students as well as different stake holders.

With the infrastructural growth such as addition of new buildings, hostels, renovation of library laboratories and playground, it also emphasized to enhance its academic quality to reach the institution to a new height. It contributed toppers in Sociology and Mathematics at University level in different years with many more best students along with achievements in sports and other fields. The institution also adopted the new curriculum as changed by Utkal University at different times and prepared the students accordingly with a new idea to compete with the other in national and international levels. The contribution of its NCC, NSS and YRC students has a remarkable effect in serving the society by awarding and donating blood, planting trees, campuscleaning, observing national days etc. The institution is one step ahead by planting about 4000 trees since 1990 to make the campus an eco-friendly environment with a permanent green and waste management policy of its own. The institution is diversified with a planned electricity management to save energy by switching off the unused buildings and converting whole institution with LED bulbs. This year, the institution has also planned to install solar power to provide the main building where main electric consumption is there.

The institution has a fully operational website providing day to day information and has also fully automated library with INFLIBNET connection and e-portals to provide easy access to its all the stake holders.



Location of Pattamundai College

### **Vision of the College**

- ❖ To make higher education qualitative and value based for the socio-economic transformation of the nation.
- ❖ To install a sense of discipline and morality among the student's community for the making the students socially responsible citizens.

### **Mission of the College**

- ❖ To grow into an institution of excellence and exemplary at the university level
- ❖ To provide literary, scientific, professional and technical education to the aspiring rural youth at a minimum cost.
- ❖ To be recognized as an institution with proven capacity to provide quality education in Science, Commerce & Humanities.
- ❖ To create symbiotic relationship with the society to meet the changing needs
- ❖ To introduce self-financing courses in multidisciplinary area.
- ❖ To adopt continues measures to improve the quality of the programme.
- ❖ To provide need-based career-oriented courses to the needs of the society
- ❖ To involve the Alumni for all round development of the college

**NAAC Accreditation: Year: 2006      2021**

**B+      B**

**Courses Offered:**

The institution offers following programmes which include the different courses as given in the table below.

<b>PROGRAMME OFFERED</b>	<b>COURSE OFFERED</b>
<b>Arts</b>	<b>Economics</b>
	<b>Education</b>
	<b>English</b>
	<b>Philosophy</b>
	<b>Sociology</b>
	<b>Odia</b>
	<b>History</b>
	<b>Political Science</b>
<b>Science</b>	<b>Chemistry</b>
	<b>Botany</b>
	<b>Physics</b>
	<b>Mathematics</b>
	<b>Zoology</b>
<b>Commerce</b>	<b>Commerce</b>

**Strength of Staff (Teaching/ Non-teaching):**

Presently this institution runs with 80 Nos of both teaching and non-teaching staff members whose continuous effort makes this institution a glorious one. Among the total staff, detailed analysis of men and women of both the categories are given.

Gender-wise Details of Teaching staff in the College.

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	43	33	10	76.74	23.26

**Gender-wise Details of Teaching staff  
in the College**



■ Male ■ Female

**Gender-wise Details of Non-Teaching staff in the College:-**

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	37	33	04	89.19	10.81

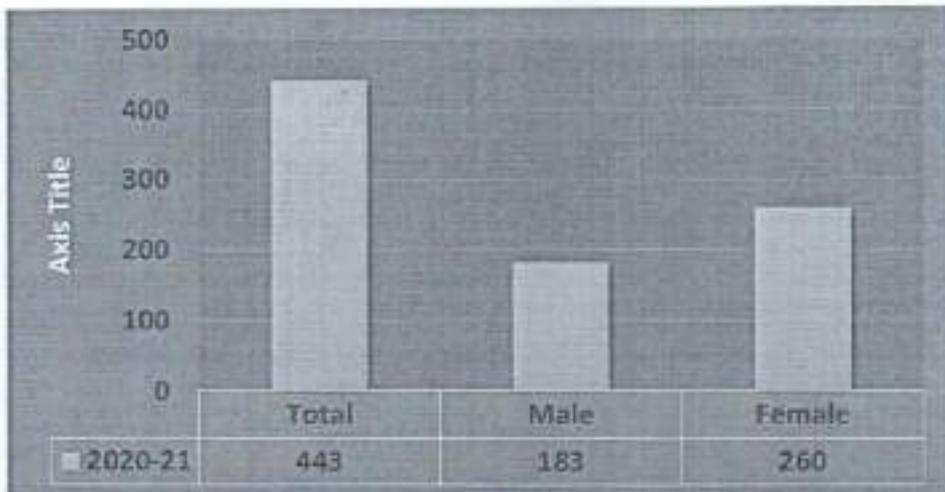
**Gender-wise Details of Non-Teaching  
staff in the College**



■ Male ■ Female ■ ■

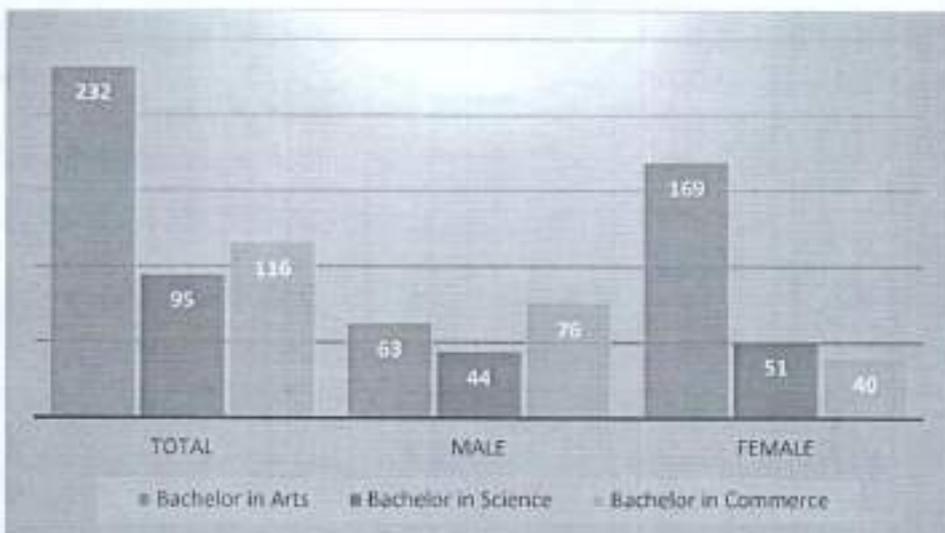
**Gender wise Details of Total Students in the College**

Sl. No	Academic Year	Total	Male	Female	Male Percentage	Female Percentage
1	2020-21	443	183	260	41.31 %	58.69 %



**Gender wise Details of Total Students in programme wise.**

Sl. No	Name of the Programme	Total	Male	Female	Male Percentage	Female Percentage
1	Bachelor in Arts	232	63	169	27.16	72.84
2	Bachelor in Science	95	44	51	46.32	53.68
3	Bachelor in Commerce	116	76	40	65.52	34.48



**Physical structure (Area/ Built up area/ No. of class rooms/ libraries/ administrative rooms/ laboratories/ auditoriums/ conference rooms/ staff common rooms/ students common rooms/ hostels/ canteens/ others)**

The institution has a land area of 14.6 acres of its own which is surrounded with pacca boundary fully to check the free access of the trespassers to overcome any kind of huddles in its academic atmosphere. Out of this, the built up area covers 10299.23m<sup>2</sup> which includes the physical structures given in the list below to cater the need of the students as well as all other stakeholders. The rest part of the total area covers a huge playground with full of green lands of different plants. Different gardens inside the campus add to its beautification in many folds.

Details of Physical Structures	
Physical Structure	Area/No
Total Area	14.6 Acre
Built Up Area	10299.23 m <sup>2</sup>
Class Rooms	32
Libraries	01
Administrative rooms	05
Laboratories	04
Auditoriums	01
Conference rooms	01
Staff common rooms	01
Students common rooms	02
Hostels	03
Canteens	01
Guest House	01
Post Office	01
Staff Quarter	02

Stadium	01
Security Rooms	03
Principal Quarter	01
Cycle Stand	01
Examination Hall	01
Lavatories	14

Construction Area in Sqft.		
Specific area	Size in ft	Total area in ft <sup>2</sup> .
Staff Common Room to Boys Lavatories	2(200 X 28 )	11200
Administrative Block	2(125 X 28 )	7000
Zoology Department	89 X 37	3293
Examination Hall	2(115 X 25)	5750
Room No-01 to 06	145 X 26	37770
Room No-26 & 27	64 X 27	1727
Library Hall	2(137 X 38)	10412
Chemistry, Botany & Math Laboratory	100 X 68	6800
Boys Hostel	92 X 67	6164
Principal Quarter	51 X 34	1734
Guest House	62 X 56	3472
Canteen	34 X 23	782
Old Chemistry Block	87 X 42	3650
Post Office	36 X 46	1656
New OBC Hostel	3(94 X 52)	14664
Ladies Hostel	2 (112 X 90)	20160

Staff Quarter	79 X 35	2765
Cycle Stand	35 X 18	630
Stadium	72 X 31	2232
Security 3 Nos. Room	10 X 12.5	125
	25 X 10	250
	10 X 12.5	125
Total		110860 ft <sup>2</sup> =10,299.23 m <sup>2</sup>

### Establishment of Environment Management System

- **Declaration of Environment Policy**

The institution has its own environment policy to set up the targets which technically possible for the environmental protection and economically possible to create eco-friendly green environment .The different policies are

- To create the sense for environmental protection for the society.
- To aware and educate different stake holders regarding relevant laws and regulations of environmental protection.
- To aware about planting of more number of trees and reduce fossil fuel consumption.
- To reduce energy consumption and avoid plastic based materials.
- To aware the local people by making continuous rally with placards, posters and road show by the students.
- To avoid the burning of coal, wood, leaves, dung cake for different purposes and give more emphasis on use of natural gas.
- To dispose the particular wastes in proper manner as per then rule.
- **Planning of programme or activity**

The institution has an annual plan and programme for the different activities relating to plantation, gardening (ornamental and medicinal), beautification, auction of uprooted

trees, and waste disposal of its own. The different stake holders such as NCC, NSS, YRC, Alumni etc. are advised accordingly to perform such activities in due course of time to adhere the environmental policy of this institution.

- **Implementation and operation**

As per the programme, the institution is planted with different trees by our different stake holders and they are well aware to take care of these plants. Regular awareness programme, meetings and placards rally are going on to aware and activate the students, staff and people of this locality. Cleanliness programme are regularly done to make the campus clean. The watering of plants and garden are regularly done through supplied, waste and harvested rain water. The wastemanagement of the institution is properly done as explained in the waste management.

### **OBJECTIVES OF GREEN AUDIT**

The objectives of Environmental Audit in Pattamundai College are:

- To recognize the initiative taken by the College towards environment.
- To recognize, diagnose and resolve the environmental problems.
- To recognize the effects of the College on the environment and vice versa.
- To identify and control the impact of activities of the College on environment.
- To suggest the best protocols for sustainable environment.
- To assess environmental performance and the effectiveness of the measures to achieve the defined objectives and targets.
- To identify the different pressures on the College to improve their environmental performance.
- To ensure that the natural resources are utilized properly as per national policy of environment.
- To set the procedure for disposal of all types of harmful wastes.
- To reduce energy consumption.

- To give preference to the most energy efficient and environmentally sound appliances.
- To minimize the consumption of water and monitor its quality.
- To identify the risks of hazards and implement the policies for safety of stakeholders.
  - To make sure that rules and regulations are taken care to avoid the interruptions in environment.
- To provide baseline information to enable the College to evaluate and manage environmental change, threat and risk.
- To identify the gap areas and suggest recommendations to improve the Green Campus status of the College.

## **TARGET AREAS OF GREEN AUDITING**

Green audit forms part of a resource management process. Although they are individual events, the real value of green audit is the fact that they are carried out, at defined intervals, and their results can illustrate improvement or change over time. The concept mainly focuses on the efficient use of energy and water; minimize waste generation or pollution and also economic efficiency.

All these indicators are assessed in the process of Green Auditing of this Institute. It focuses on the reduction of contribution to emissions, procure a cost effective and secure supply of energy, encourage and enhance energy use conservation, promotes personal action, reduce the institute's energy and water consumption, reduce wastes to landfill, and integrate environmental considerations into all services considered to have significant environmental impacts. Target areas included in this green auditing are water, energy, waste, green campus and carbon footprint.

### **Auditing for Water Management**

Water is a natural resource; all living organisms depend on water. Groundwater depletion and water contamination are taking place at an alarming rate. Hence it is essential to examine the quality and usage of water in the college. Water auditing is

conducted for the evaluation of facilities of raw water intake and determining the facilities for water treatment and reuse. The concerned auditor investigates the relevant method that can be adopted and implemented to balance the demand and supply of water.

#### **Auditing for Energy Management**

Energy conservation is an important aspect of campus sustainability which is also linked with carbon foot print of the campus. Energy auditing deals with the conservation and methods to reduce its consumption related to environmental degradation. It is therefore essential that any environmentally responsible institution examine its energy use practices.

#### **Auditing for Waste Management**

Human activities create waste, and it is the way these wastes are handled, stored, collected and disposed of, which can pose risks to the environment and to public health. Pollution from waste is aesthetically unpleasing and results in large amounts of litter in our communities which can cause health problems. Solid waste can be divided into three categories: bio-degradable, non- biodegradable and hazardous waste. Bio-degradable wastes include food wastes, canteen waste, wastes from toilets etc. Non-biodegradable wastes include what is usually thrown away in homes and schools such as plastic, tins and glass bottles etc. Hazardous waste is waste that is likely to be a threat to health or the environment like cleaning chemicals, acids and petrol. Unscientific management of these wastes such as dumping in pits or burning them may cause harmful discharge of contaminants into soil and water supplies, and produce greenhouse gases contributing to global climate change respectively. Special attention should be given to the handling and management of hazardous waste generated in the college. Bio-degradable waste can be effectively utilized for energy generation purposes through anaerobic digestion or can be converted to fertilizer by composting technology. Non-biodegradable waste can be utilized through recycling and reuse. Thus, the minimization of solid waste is

essential to a sustainable college. The prevailing waste disposal policies are assessed and suggestions made on the best way to combat the problems.

### **Auditing for Green Campus Management**

Trees play an important ecological role within the urban environment, as well as support improved public health and provide aesthetic benefits to cities. In one year, a single mature tree will absorb up to 48 pounds of carbon dioxide from the atmosphere, and release it as oxygen. The amount of oxygen released by the trees of the campus is good for the people in the campus. So while you are busy studying and working on earning those good grades, all the trees in campus are also working hard to make the air cleaner for you.

### **Auditing for Carbon Footprint**

Burning of fossil fuels (such as petrol) has an impact on the environment through the emission of greenhouse gases into the atmosphere. The most common greenhouse gases are carbon dioxide, water vapour, methane, nitrous oxide and ozone. Of all the greenhouse gases, carbon dioxide is the most prominent greenhouse gas, comprising 402 ppm of the Earth's atmosphere. The release of carbon dioxide gas into the Earth's atmosphere through human activities is commonly known as carbon emissions. Vehicular emission is the main source of carbon emission in the campus, hence to assess the method of transportation that is practiced in the college is important.

### **METHODOLOGY ADOPTED**

The methodology adopted to conduct the Green Audit of the college had the following components

#### **Onsite Visit**

Three day field visit was conducted by the Green Audit Team . The key focus of the visit was on assessing the status of the green cover of the college, their waste management

practices and energy conservation strategies etc.

### **Group Discussion**

The Group discussions were held with the staff members, students and the management focusing various aspects of Green Audit. The discussion was focused on identifying the attitudes and awareness towards environmental issues at the institutional and local level. Energy, waste management and Carbon foot print analysis Survey

With the help of teachers and students, the audit team assessed the energy consumption pattern and waste generation, disposal and treatment facilities of the college. The monitoring was conducted with a detailed questionnaire survey method.



Pre Audit Meeting

### **AUDIT STAGE**

Green auditing began with the assessment of the status of the green cover of the Institution followed by waste management practices and energy conservation strategies etc. Different facilities at the college were monitored, different types of appliances and utilities (lights, taps, toilets, fridges, etc.) were determined as well as measuring the

usage per item (Watts indicated on the appliance or measuring water from a tap) and identifying the relevant consumption patterns (such as how often an appliance is used) and their impacts. The staff were interacted to get details of usage, frequency or general characteristics of certain appliances.

Data collection was done in the sectors such as Energy, Waste, Greening, Carbon footprint and Water use. College records and documents were verified several times to clarify the data received through survey and discussions. The environment samples including water, soil from various location of the campus were collected and analyzed at government recognized testing laboratories.



Post Audit Discussion

## GREEN AUDIT REPORT

### Water Quality assessment Water quality:

Water samples were collected from 4 different sites such as tube well water (boys hostel), pond water (near main building) and two bore wells of the campus and analyzed for the basic parameters by sending State Food Testing Laboratory, Bhubaneswar, Odisha whose results are given in the tabular form.

Parameters	Tube Well Water (Boys hostel)	Pond Water (Near Main Building)	Bore Well Water 1	Bore Well Water 2	Standard value (BIS)	BSI
Colour	Nil	Nil	Nil	Nil	Agreable	
Odour	Nil	Nil	Nil	Nil	Agreable	
Alkalinity (mg/l)	150	136	152	110	200	
Chloride (mg/l)	32	28	36	34	250 mg/l Max	
Residual Free Chlorine (mg/l)	Nil	Nil	Nil	Nil	0.2 mg/l Max	
Total Hardness (Total)	62	54	64	58	200 mg/l Max	
Iron (as Fe) (mg/l)	3.5	Nil	Nil	Nil	1.0 mg/l Max	
pH	6.0	6.5	7.0	7.5	6.0 to 8.5	
Turbidity	20 NTU	15 NTU	Nil	Nil	1 NTU Max	
Sulphate as SO <sub>4</sub> -2 (mg/l)	Nil	Nil	Nil	Nil	200 mg/l Max	
Total Alkalinity (as HCO <sub>3</sub> -) (mg/l)	150	136	152	110	200 mg/l Max	
Nitrate (as NO <sub>3</sub> -)	Nil	Nil	Nil	Nil	45 mg/l Max	
Nitrate (as NO <sub>2</sub> -)	Nil	Nil	Nil	Nil	0.02 mg/l Max	
Test for E.Coli coliform	Negative	Negative	Negative	Negative	Absent	
MPN of Coli	Negative	+5	Absent	Absent	Negative	

form group of organisms per 100 ml					
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Water samples for testing

### **Water Management**

The institution has its own water management system. There are two deep Bore wells with two submersible pumps of capacity 2 hp and 1 hp each which meet all the need of the water. The distribution of water is properly done to different places as per the requirements. Different overhead tanks are available in different parts of the college to meet these requirements. There are 13 water purifiers and 1 cooler at different parts of the college to overcome the drinking water of the different stakeholders. The waste water obtained from different parts are well managed by watering the plants, ponds as well as sumps. Also college has access to the municipality supply water and also used at its need. Rain water harvesting system is also managed properly to watering the plants and rest to the ponds. There is also a well available in the college whose water is not used due to the supply of water from the Bore wells. The ponds are cleaned time to time for the pisciculture which add some funds to the college and consume biodegradable wastes left to the ponds through rain as well as waste water.

Sl. No	Parameters	Response	Remarks
1	Source of water	Bore Well with submersible pump, Municipality water supply, Ponds	Bore Well-02 Ponds -02
2	No of wells	01	Available but not in use (Location- Physics Department backside)
3	No of motors used	02	
4	Horse power (motor)	2 hp and 1 hp each	Total Quantity -02
5	Depth of well	20 feet	
6	Water level	10 feet	
7	No of water tanks	20	
8	Capacity of tank	18,000 L	2000 L × 4 = 8000 L 750 L × 4 = 3000 L 1000 L × 6 = 6000 L 500 L × 2 = 1000 L
9	Qty of water pumped everyday	10,000 L	Regular use before COVID-19
10	No of ponds	02	Near College Canteen-01 Boys Hostel -01
11	Any water wastage/ why?	No	
12	Water usage for gardening	Yes	

13	Waste water sources	Lavatory College Office & Building Laboratory(Physics, Chemistry, Zoology & Botany) Water Cooler & Water Purifiers. Outlet Boys & Girls Hostel, Toilets, Kitchen & wash basin outlet	
14	Use of waste water	Gardening, Plantation & Drained to ponds for storage.	
15	Fate of wastewater from labs	Soak pits are made at their outlet to absorb within	
16	Whether waste water from labs mixed with ground water	No	Absorbed fully within the soak pits.
17	Whether any green chemistry method practiced in labs	No	
18	Any treatment of lab water	No	Only absorbed through soak pits.
19	No of watercoolers	01+13 =14	01-Water Cooler 11-Kent RO water Purifier 02-UV water purifiers
20	Rain water	Yes	

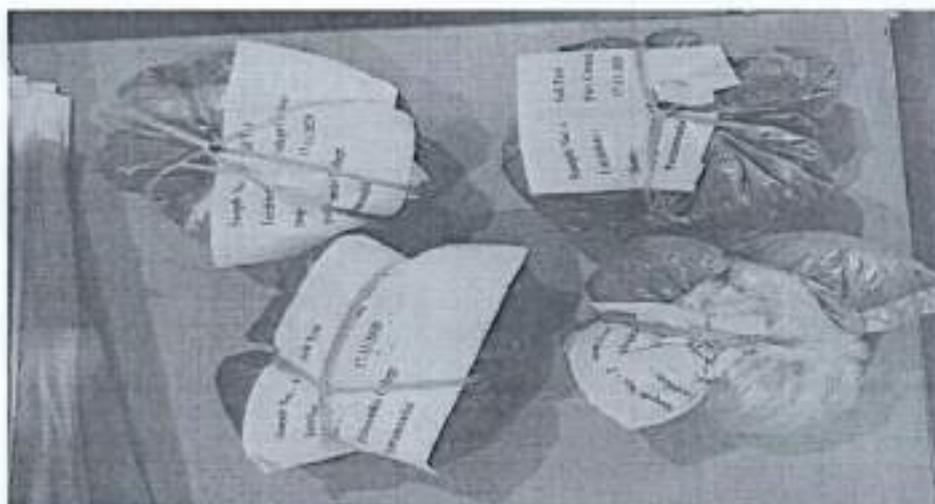
	harvest available?		
21	No of units and amount of water harvested	02 units	
22	Any leakytaps	No	
23	Amount of water lost per day	Nil	
24	Any water management plant used	No	
25	Any water saving techniques followed	Yes	Urinals are equipped with push pull angle cocks to prevent wastage of water. Overhead water tanks connected with ball cock to prevent water spillages automatically
26	Are there any signs reminding people to turn off the water		Overhead tanks are also connected with drain Pipes in case water fall on ground because of faulty ball cock.

#### Soil Quality Assessment

Soil samples were collected from four locations such as ornamental garden, playground, herbal garden and back side of the main building plantation area of the campus and analysed the basic Parameters Krushi Vigyan Kendra, Kendrapara, Odisha. The results are tabulated and presented in the table.

Parameter	Location 1	Location 2	Location 3	Location 4
pH	5.8	5.4	5.9	6.2
Total Available Nitrogen (kg/ha)	195.2	175.6	205.3	220.4

Total organic carbon (%)	0.39	0.35	0.41	0.44
Available Phosphorous (kg/ha)	10.2	9.3	10.4	11.3



Soil samples for testing

### Energy Audit

A detailed data of consumption of electricity of the institution for the sessions 2017-18, 2018-19 and 2019-20 are given elaborately in table separately. The consumption of electricity is varied with the addition / modification of different items/ instruments. The institution is equipped with modern / updated electric appliances such as 5star rated instruments LED tube and bulbs to reduce the energy consumption. It also tried to add solar energy system to further save and use of green energy.

**Data Sheet for Energy Audit of the Session: 2020-21**

Room No./ Name	Electrical device/ Items (Bulbs: CFL/ Incandescent/ CFL;AC, Fan/ Computer, Instruments, Other appliances)	Number	Power	Usage Time (Hr/Day)
NAAC	Fan	2	140	5
	LED	3	36	5
	Desktop	2	440	5
	Laptop	1	150	5
	AC	1	1500	2
	Printer	2	440	5
Principal's Office	Fan	3	210	7
	LED	3	36	7
	Laptop	1	150	7
Principal's Res tRoom	Fan	1	70	5
	LED	3	36	5
	Desktop	1	220	5
	CCTV DVR	1	220	24
	AC	1	1500	2
	Printer	1	220	5
	Refrigerator	1	125	24
Account Section	Fan	2	140	7
	LED	4	48	7
	Desktop	1	220	7
	Printer	2	220	5
Administrative Office	Fan	2	140	7
	LED	8	96	7
	Desktop	1	220	7
	Printer	1	220	5
Office Veranda	Tube Light	4	48	5
Staff Commo nRoom	Fan	8	560	7
	LED	16	240	7
	AC	3	4500	3
	Water Purifier	1	30	24
	Fan	8	560	5

Examination Section	Tube Light	9	360	5
	Desktop	1	220	5
SAMS	Fan	1	70	5
	Tube Light	2	80	5
	Desktop	3	220	5
	Xerox	1	350	5
Education Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Laptop	1	150	5
Economics Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Laptop	1	150	5
	Printer	1	220	5
Sociology Seminar	Fan	2	140	5
	Tube Light	2	80	5
	Laptop	1	150	5
English Seminar	Fan	1	70	5
	Tube Light	1	40	5
	Laptop	1	150	5
	Printer	1	220	5
Philosophy Seminar	Fan	2	140	5
	Tube Light	1	40	5
	Laptop	1	150	5
Vocational Office	Fan	1	70	5
	Tube Light	2	80	5
Odia Seminar	Fan	3	210	5
	Tube Light	2	80	5
History Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Desktop	1	220	5
Political Science Seminar	Fan	3	210	5
	Tube Light	3	120	5
	Laptop	1	150	5
Commerce Seminar	Fan	3	210	5
	Tube Light	4	160	5
	Laptop	1	150	5
Ladies	Fan	2	14	5
	Tube Light	6	240	5

nRoom	Commo	Fan	9	630	5
Zoology Department		Tube Light	10	400	5
		Laptop	1	150	5
		LED	6	72	5
Motor Room		Motor	1	1492	4
		Bulb	1	40	4
Class Room No 08		Fan	8	560	5
		LED	4	60	5
Class Room No 10		Fan	4	280	5
		LED	3	45	5
Class Room No 09		Fan	1	70	5
		LED	1	15	5
Class Room No 07		Fan	2	140	5
		LED	2	30	5
Class Room No 14		Fan	1	70	5
		LED	1	15	5
Class Room No 15		Fan	1	70	5
		LED	1	15	5
Class Room No 16		Fan	6	210	5
		LED	3	45	5
Class Room No 17		Fan	1	70	5
		LED	1	15	5
Class Room No 18		Fan	1	70	5
		LED	1	15	5
Class Room No 19		Fan	1	70	5
		LED	1	15	5
Class Room No 20		Fan	6	420	5
		LED	3	45	5
Class Room No 21		Fan	8	560	5
		LED	4	60	5
Class Room No 23		Fan	6	420	5
		LED	3	45	5
Class Room No 24		Fan	2	140	5
		LED	2	30	5
Class Room No 25		Fan	10	700	5
		LED	5	75	5
		Fan	9	630	5
		LED	13	295	5

Physics Department	Desktop	1	220	5
	Water Purifier	1	30	24
	Refrigerator	1	125	24
	Printer	1	220	5
Botany Department	Fan	11	770	5
	LED	7	140	5
	Desktop	1	220	5
	Water Purifier	1	30	24
	Refrigerator	1	125	24
Mathematics Department	Fan	4	280	5
	LED	6	9	5
	Desktop	6	1320	5
	Printer	1	220	5
Chemistry Department	Fan	12	840	5
	LED	3	45	5
	Tube light	7	280	5
Library	Fan	25	1750	5
	Tube Light	13	520	5
	LED	20	300	5
	Desktop	3	660	5
	Printer	1	220	5
Boys Hostel	Fan	12	840	5
	Tube Light	16	192	5
	LED	11	132	5
Ladies Hostel	Fan	24	1680	5
	Tube Light	25	1000	5

**Annual Electricity Bill:** 2020-21 Rs .82,255/-

The total energy utilization of the college for different purposes is approximately **17856.97 units/month**. Increased production of solar energy a type of nonconventional category of energy will be a good energy management system for the college. Electricity charges per month are **Rs.100000/month**. Energy saving through the replacement of incandescent bulbs, CFL lamps and tube lights to LED light could be a good option. Energy efficient electrical equipment especially fans

and pump sets can be replaced against old ones. Awareness programs for the stakeholders to save energy may also increase sustainability in the utilization of various energy sources.

**Availability of solar power with details:**

The college has already installed luminous PCU 7.5 KVA solar power system since 2020-21 academic session which is sufficient enough to meet the power supply from renewable energy sources in the Central Office and the IQAC Room .

**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. Annexure -2

**Waste Management for the session 2020-21**

Approximate quantity of waste generated per day (in kg)

Approx.	Biodegradable	Non-biodegradable	Hazardous	Others
<b>Office</b>				
<1 Kg	√	√	Nil	Nil
2-10 Kg				
>10 Kg				
<b>Laboratories</b>				
<1 Kg	√	√	Nil	Nil
2-10 Kg				
>10 Kg				
<b>Canteen/ Kitchen</b>				
<1 Kg		√	Nil	Nil
2-10 Kg				
>10 Kg	√			

### How the waste generated in the college are managed

	Yes/ No	Remark
Composting/ Vermicomposting	Yes	
Recycling	Yes	Waste water used for gardening
Reusing		
Other ways		

### Waste generated in the College

	Yes/ No	Remark
E-waste	Yes	All the E-Wastes (315 Kg) of the College up to 30-09-2020 have already been disposed to State Pollution Control Board, Odisha in College letter No 946 dated 30- 09-2020 with generation of Rs 4094/- towards college fund.
Hazardous waste	Yes	Hazardous wastes generated from different laboratories are well managed by dumping in sealed sump.
Solid waste	Yes	The Biodegradable solid wastes are consumed for Vermi composting purpose and Non- biodegradable wastes are handed over to municipality through its regular collection vehicle.
Dry leaves	Yes	Used for Vermi composting purpose.
Canteen	Yes	The waste generated from the canteen is disposed as mentioned in the above process.
Liquid waste	Yes	All types of liquid wastes are used for gardening, plantation and pond watering.
Glass	Yes	As this is treated as solid waste, it is handed over to

		municipality for its proper disposal.
Unused equipment	Yes	Disposed as E-Waste
Napkins	Yes	Biodegradable and disposed as me
Others (specify)	-	

### Green Campus

The institution is sincerely concerned about the environmental pollution too early for which many timber yielding plants as well as medicinal plants were planted in the campus since 1990. This is a continuous practice of this institution for which it has reached around 4000 trees of different kinds. It not only reduces the green house gases but also supplies huge amount of oxygen to create an eco-friendly environment. The Google earth picture and detailed list of plants are given below for the information. As this is a cyclone prone area, almost every year the institution suffers loss of some trees which is used for the generation of funds by selling the broken trees. The details of fund generation in different years are given in annexure- V.

### Tree Enumeration by staff and students

List of Plants in the campus 2020-21			
1	Ficus benghalensis	Bara	1
2	Cedrus deodara	Debadaru	120
3	Terminalia arjuna	Arjuna	358
4	Syzygium cumini	Jamu	10
5	Emblica officinalis	Amla	6
6	Callistemon citrinus:	Bottle brush	3
7	Alstonia scholaris	Chhatiana	15
8	Azardichta indica	Nimba	218
9	Millettia pinnata	Karanja	280
10	Bombax ceiba	Simili	7
11	Simarouba glauca	Simrua	124
12	Saraca asoca	Asoka	25
13	Phoenix dactylifera	Khajuri	33

14	<i>Neolamarckia cadamba</i>	Kadamba	5
15	<i>Melia azedarach</i>	Mahanimba	17
16	<i>Cocus nucifera</i>	Nadia	41
17	<i>Syzygium austral</i>	Australian Cherry	6
18	<i>Terminalia bellirica</i>	Bahada	1
19	<i>Swietenia macrophylla</i>	Mahogany	121
20	<i>Artocarpus heterophyllus</i>	Panasa	9
21	<i>Hevea brasiliensis</i>	Rubber	1
22	<i>Mangifera indica</i>	Amba	15
23	<i>Dalbergia sisso</i>	Sisu	41
24	<i>Tectona grandis</i>	Saguan	275
25	<i>Roystonea regia</i>	Areca palm	2
26	<i>Ficus carica</i>	Dimiri	5
27	<i>Acacia auriculiformis</i>	Akasia	8
28	<i>Psidium guava</i>	Pijuli	12
29	<i>Albizia lebbek</i>	Sirisa	21
30	<i>Casuarina equisetifolia</i>	Jhaun	41
31	<i>Magnolia Champaka</i>	Swarna champa	7
32	<i>Dellenia indica</i>	Ou	7
33	<i>Terminallia cattappa</i>	Katha badam	27
34	<i>Streblus asper</i>	Sahada	18
35	<i>Delonix regia</i>	Krushnachuda	17
36	<i>Caesalpinia pulcherrima</i>	Radhachuda	15
37	<i>Mimusops elengi</i>	Baula	14
38	<i>Gmelina arborea</i>	Gambhari	19
39	<i>Aegle marmelos</i>	Bela	6
41	<i>Diospyros melanoxylon</i>	Kendu	5
42	<i>Schleichera oleosa</i>	Kusum	1
43	<i>Annona reticulata</i>	Ata	1

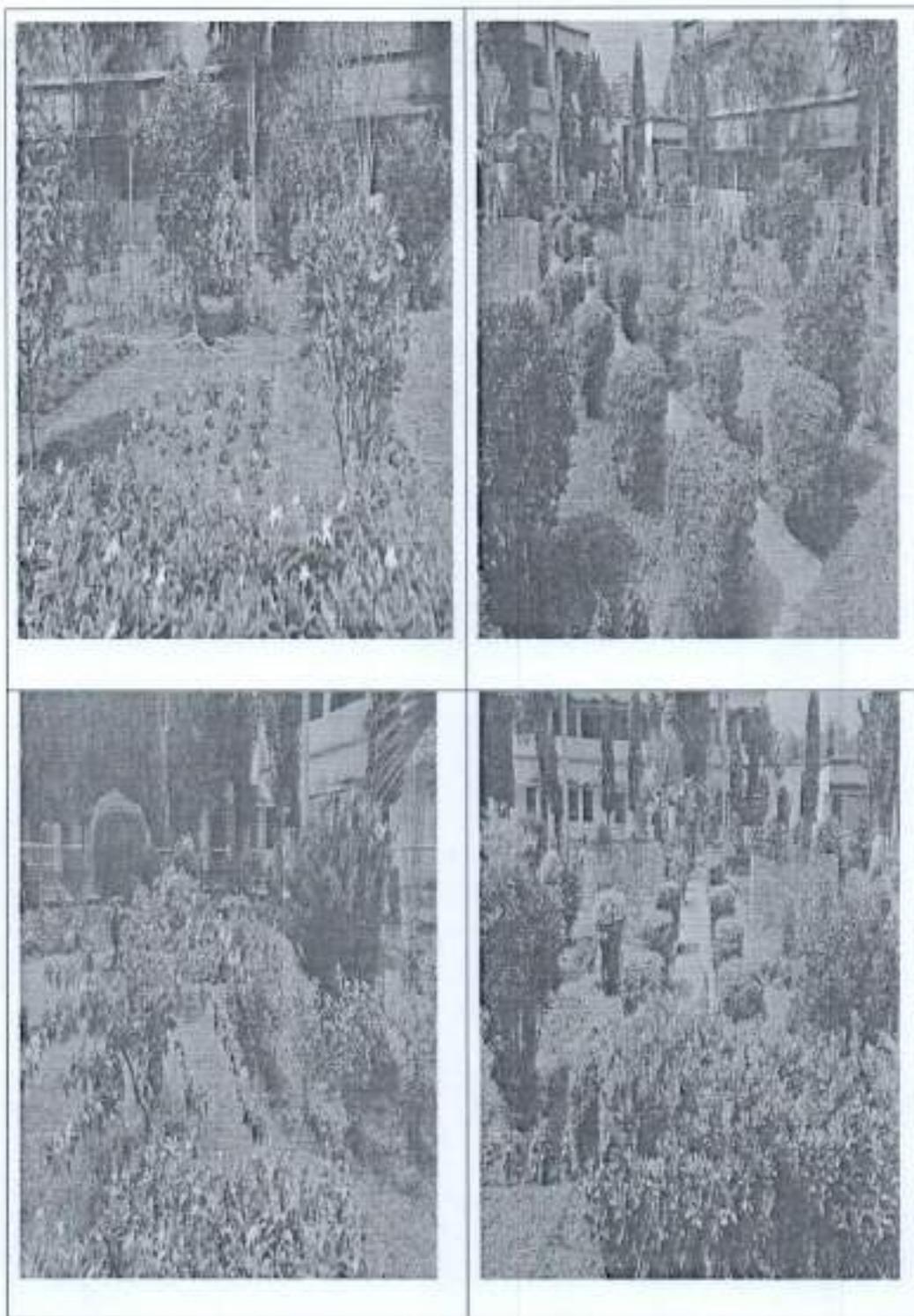
		Total	4264
--	--	-------	------

**No of trees planted:**

Session	No. of trees planted	No. of trees broken	Total no. of trees
2017-18	550	Nil	3940
2018-19	127	35(Due to cyclone)	4022
2019-20	194	23(Due to cyclone)	4193
2020-21	71	Nil	4264

**No of gardens:**

Garden Types	Number
Ornamental Garden	02
Medicinal Garden	01
Orchards	01
Others	01



College Garden

### List of Medicinal plants in herbal garden of Pattamundai College

Sl.No	Common Name	Botanical Name
1	Amla	<i>Phyllanthus emblica</i>
2	Bela	<i>Aegle marmelos</i>
3	Gangasiuli	<i>Nictanthes arbor-tristis</i>
4	Amarpoi	<i>Kalanchoe pinnata</i>
5	Manjuati	<i>Lawsonia inermis</i>
6	Bahada	<i>Terminalia bellirica</i>
7	Mandara	<i>Hibiscus rosa-sinensis</i>
8	Dhanwantari	<i>Cymbopogon flexuosus</i>
9	Pipali	<i>Piper longum</i>
10	Tulasi	<i>Ocimum sanctum</i>
11	Ghritkumari	<i>Aloe vera</i>
12	Badiamla	<i>Phyllanthus fraternus</i>
13	Satabari	<i>Asparagus racemosus</i>
14	Brahmi	<i>Bacopa monnieri</i>
15	Dayana	<i>Artemisia vulgaris</i>
16	Rukuna	<i>Coleus barbatus</i>
17	Banadhania	<i>Eryngium foetidum</i>
18	Karpura tulasi	<i>Ocimum kilimandscharicum</i>
19	Chireita	<i>Andrographis paniculata</i>
20	Pasaruni	<i>Paederia foetida</i>
21	Salaparni	<i>Desmodium gangeticum</i>
22	Ramatulasi	<i>Ocimum gratissimum</i>
23	Satabari	<i>Asparagus racemosus</i>
24	Gugula	<i>Commiphora caudata</i>
25	Agaru bacha	<i>Alpina galanga</i>
26	Ankaranti	<i>Cauroupita guianensis</i>
27	Dalchini	<i>Cinnamomum verum</i>
28	Tejapatra	<i>Cinnamomum tamala</i>
29	Kanchana	<i>Bauhinia variegata</i>
30	Insulin	<i>Costus igneus</i>
31	Thalkudi	<i>Centella asiatica</i>
32	Pana	<i>Piper betle</i>
33	Kanaka champa	<i>Pterospermum acerifolium</i>
34	Kaladudura	<i>Datura metel</i>
35	Anatamula	<i>Hemidesmus indicus</i>
36	Annapurna	<i>Pandanus amaryllifolius</i>
37	Arsha	<i>Crinum asiaticum</i>
38	Aswagandha	<i>Withania somnifera</i>
39	Bacha	<i>Acorus calamus</i>
40	Bajramuli	<i>Sida cordifolia</i>
41	Bhrungaraj	<i>Wedelia chinensis</i>
42	Brudhadaraka	<i>Argyrea nervosa</i>
43	Dhala arakha	<i>Calotropis procera</i>

44	Durlava	<i>Ocimum basillicum</i>
45	Golamaricha	<i>Piper nigrum</i>
46	Guluchi	<i>Tinospora cordifolia</i>
47	Hadajoda	<i>Cissus quadrangularis</i>
48	Hemasagar	<i>Kalanchoe lanceolata</i>
49	Keukeua	<i>Costus speciosus</i>
50	Sarpagandha	<i>Rauwolfia serpentina</i>
51	Pipermint	<i>Mentha arvensis</i>
52	Raktakhai	<i>Ventilago madrasapatana</i>
53	Sadabihari(Dhala)	<i>Catharanthus pusillus</i>
54	Patalagaruda	<i>Rauwolfia tetraphylla</i>
55	Stevia	<i>Stevia rebaudiana</i>
56	Akarakara	<i>Spilanthes calva</i>
57	Amba ada	<i>Curcuma amda</i>
58	Bisalyakarani	<i>Tridax procumbens</i>
59	Ayapan	<i>Eupatorium ayapana</i>
60	Koilikhia	<i>Hygrophylla auriculata</i>
61	Lajakuli	<i>Mimosa pudica</i>
62	Madaranga	<i>Alternanthera sessilis</i>
63	Pitasaga	<i>Glinus oppositifolius</i>
64	Antamula	<i>Hemidesmus indicus</i>
65	Antamuli	<i>Tylophora indica</i>
66	Aparajita(Dhala)	<i>Clitoria ternatea</i>
67	Aparajita(Kala)	<i>Clitoria pusilis</i>
68	Dahadahia	<i>Ipomoea reniformis</i>
69	Gudumari	<i>Gymnema sylvestre</i>
70	Multivitamin green	<i>Sauropus androgynus</i>
71	Loni	<i>Morinda citrifolia</i>
72	Kalama	<i>Ipomoea aquatica</i>
73	Sadabihari(violet)	<i>Catharanthus roseus</i>
74	Apamaranga	<i>Achyranthes aspera</i>
75	Kala arakha	<i>Calotropis gigantea</i>
76	Brahmajasti	<i>Clerodendrum serratum</i>
77	Gayasa	<i>Leucas aspera</i>
78	Raktachita	<i>Plumbago indica</i>
79	Swetachita	<i>Plumbago zeylanica</i>
80	Pauinsia	<i>Aerva lanata</i>
81	Talamuli	<i>Curculigo orchoides</i>
82	Bena	<i>Vetiveria zizanioides</i>
83	Gada	<i>Diospyros sylvatica</i>
84	Krushna pami	<i>Uraria picta</i>
85	Gandhasunthi	<i>Kaempferia galanga</i>
86	Sunusunia	<i>Marsilea quadrifolia</i>
87	Swetachandana	<i>Santalum album</i>
88	Raktachandana	<i>Pterocarpus santalinus</i>
89	Nagachampa	<i>Couropita guianensis</i>
90	Bhadraksya	<i>Gauzuma ulmifolia</i>
91	Banapiaja	<i>Urginea dubius</i>

92	Biribiri	<i>Spilanthes paniculata</i>
93	Kalahaladi	<i>Curcuma caesia</i>
94	Methi	<i>Trigonella foenum-graecum</i>
95	Bathua	<i>Chinopodium album</i>
96	Bhuinamla	<i>Phyllanthus niruri</i>
97	Ambiliti	<i>Oxalis pes-caprae</i>
98	Mashaparni	<i>Teramnus labialis</i>
99	Sankhapushpi	<i>Evolvulus alsinoides</i>
100	Olatakamala	<i>Abroma augustum</i>
101	Kaincha	<i>Mucuna radians</i>
102	Podina	<i>Mentha arvensis</i>
103	Kala tulasi	<i>Ocimum tenuiflorum</i>
104	Queen Pineapple	<i>Ananas comosus</i>
105	Brajamalli	<i>Clerodendron chinense</i>
106	Gobinda garuda	<i>Trewia nudiflora</i>
107	Akadia	-
108	Akalmundi	-
109	-	<i>Aclema radicans</i>



#### Herbal Garden Routine Green Practices: Celebration of important days

The institution celebrated the following important days during each year to

aware, observe and perform the activities by the different stakeholders.

SL No.	Important days	Activities
1	National Youth Day	Awareness
2	Republic Day	Campus Cleaning and Awareness
3	World Sustainable Energy Day	Energy Saving Awareness
4	World Wildlife Day	Plantations and Awareness
5	Gopabandhu Jayanti	Campus Cleaning and Awareness
6	World Water Day	Water Conservation Awareness
7	World Earth Day	Campus Cleaning
8	World Red Cross Day	Blood Donation
9	Netaji Jayanti	Observation & Awareness
10	NSS Day	Campus Cleaning and Social work
11	World Environment Day	Plantations and Awareness
12	International Yoga Day	Yoga Camp & Seminar
13	NCC Day	Parade, Campus Cleaning and Awareness
14	Gandhi Jayanti	Campus Cleaning and Awareness
15	World Aids Day	Observation and Awareness
16	Human Right Day	Observation and Awareness
17	Kargil Vijay Diwas	Observation and Awareness
18	Environmental pollution vs industrial development	Webinar on 31 <sup>st</sup> august 2020
19	Role of chemistry in sustainable development of society	Webinar on 28 <sup>th</sup> September 2020
20	Industrialization urbanization and development	Webinar on 10 <sup>th</sup> September 2020
21	Biology of SARS-Cov-2	Webinar on 19 <sup>th</sup> September 2020
22	Climate change and agriculture	Webinar on 26 <sup>th</sup> September 2020
23	Biodiversity conservation : its challenge and opportunities	Webinar on 19 <sup>th</sup> November 2020
24	Mapping of genes causing congenital ocular decease and use of bio pesticides:- an ecofriendly approach to enhance agricultural productivity	Webinar on 26 <sup>th</sup> November 2020

### Carbon footprint analysis

Burning of fossil fuels such as petrol has an impact on the environment through the emission of greenhouse gases into the atmosphere; of these carbon dioxide is the most prominent greenhouse gas, comprising 402 PPM of the Earth's atmosphere. The release of carbon dioxide gas into the Earth's atmosphere through human activities is

commonly known as carbon emissions in which the vehicular emission and burning of natural gas are the main sources in the campus. As this is a rural based institution, maximum stakeholders use public transport as well as own cycle through which realisation of green house gases is minimised. A very few numbers of two wheelers and cars are used by students, staff members and other stakeholders coming to the college. The natural gas used by different laboratories, hostels and canteen are very less which contribute very less green house gas for environment pollution. As there are around 4000 of trees are present in the campus this not only balances the green house gases but also supplies a huge amount of oxygen to the atmosphere to make an eco-friendly environment.

Sl No	Particulars	Numbers
1	No of cycles used in college by stakeholders	345
2	No of two wheelers used Average Distance Travelled Quantity of Fuel Amount used per day	50 5 K.M 5 L Rs 400/-
3	No of cars used Average Distance Travelled Quantity of Fuel Amount used per day	06 15 K.M 6 L Rs 480/-
4	No of persons using public transportation	920
5	No of persons using college conveyance	-
6	No of generators used per day	Rarely used as institution has inverter systems in different parts.
7	Amount of fuel used for generators per day	-
8	No of LPG cylinders used in canteen/ labs	07 Canteen - 01 Hostel - 02 Lab- 04
9	Use of any other fossil fuels in the college	-
10	Any suggestions/ planning to reduce the use of fuel	

## **MAJOR AUDIT OBSERVATIONS**

- The college has developed its own environmental policy
- The college has developed very good greenery in the campus. Almost all the available spaces have been planted with trees.
- Gardens are well maintained. It is good to have a herbal garden which would boost the knowledge of staff, students and visitors on medicinal plants.
- Purchase policy should be developed to procure environment friendly items.
- Programmes on green initiatives have to be increased.

### **Water Management**

- The water sources are safe in terms of contamination.
- The college at present does not have waste water treatment for waste water generated from laboratories and other sources.
- Per day consumption of water is high.
- Measurement of quantity of water obtained from rain water harvesting should be done.

### **Energy Management**

- Monthly use of electricity in the college is very high. As expansion is going on, the consumption would further increase.
- The communication process for awareness in relation to energy conservation is inadequate.

### **Waste Management**

- The college has proper communication with the local body for regular collection of solid waste from the college.
- E-waste disposal has been done properly as per procedure.
- Hazardous waste management need to be re-visited and local municipal body be consulted for its proper disposal.

### **Carbon Foot Print Audit**

- Motorized vehicles are not more in number in comparison to the strength of staff and students.
- Use of inverters has reduced consumption of fossil fuel for functioning of college.
- Use of gas cylinder is moderate.

### **Green Campus**

- Tree cover in the campus is adequate.
- Regular planting of trees is found adequate.
- Display boards for medicinal plants in the herbal garden have been placed with required information.

## **SUGGESTIONS AND RECOMMENDATIONS**

### **Water**

- Students can be advised to take back the food waste which would help in reducing the consumption of water for washing.
- The wells can be recharged with rainwater from rooftops of buildings.
- Construction of rainwater harvesting structures for each building can be thought of.
- Awareness programmes for water conservation can be arranged with local NGOs/ Municipal Body. Water quality monitoring should be done periodically.
- Water consumption monitoring system for the entire college should be developed.
- Display boards against the misuse of water need to be developed.

### **Energy**

- It is recommended to avoid using of more energy consuming older electrical appliances and to replace with more environment friendly and energy efficient appliances eg. Five star rating appliances in the college.
- Potential for renewable energy sources have to be explored. The advantage of large roof areas of the college can be taken for installing solar grid.
- It is recommended to use solar powered water heater and cooker in the

canteens of college/ hostels and solar powered street lights.

- The plan to establish 7.5 KVA solar grid should be materialized soon to reduce electricity consumption.
- Regular monitoring of equipment and immediate rectification of any problem should be done.

### **Green Campus**

- In order to increase the carbon credit and greenery of the campus more indigenous and evergreen trees should be planted in the spaces available and spaces created/ likely to be created due to damage and uprooting of old trees.
- Registry of flora and fauna of the college should be developed.
- Display boards for tree with scientific names in the campus need to be developed for identification and learning.
- Possibility of drip watering system for the gardens can be thought of.

### **WASTES**

- The entire campus is plastic free . The use of plastics should be avoided with use of biodegradable materials especially jute bags or paper carry bags..
- Leaf Litter from the campus can be effectively used for Organic Compost /Vermi Compost. The composting matter should be used as environmental friendly Organic Manure.
- Paper waste should be recycled instead of incineration or burning.
- The College Cafeteria wastes /Hostels Wastes should be subjected to aerobic composting by setting up more composting wastes in the campus. The process will provide a chance for the students to operate the composting yards.
- Establishment of bio-gas plant should be encouraged in order to adjust energy consumption from natural sources.
- Instead of using toxic chemicals which is responsible for environmental degradation green practices should be adopted in Laboratories and also in the campus.

#### CARBON FOOTPRINTS-

- In order to maintain the carbon acclount the College take initiaves like the use of bicycles ,no vehicle day in a month, use of CNG-Based vehicles for all stake holders is the needf of the hour.
- Moe emphasis should be given for the use of LPG- in the Hostels for cooking purposes rather than traditional methods of cooking.

## PHOTO GALLERY OF PRE AND POST GREEN AUDIT , ACADEMIC SESSION-2020-21



Pattamundai, Odisha, India  
 H+FF+W7J, Baktapur Rd, Pattamundai, Odisha 754215, India  
 Lat 20.574712°  
 Long 86.572916°  
 31/05/22 10:34 AM



Pattamundai, Odisha, India  
 H+FF+W7J, Baktapur Rd, Pattamundai, Odisha 754215, India  
 Lat 20.574724°  
 Long 86.57285°  
 31/05/22 10:29 AM



Pattamundai, Odisha, India  
 11, Pattamundai, Odisha 754215, India  
 Lat N 20° 34' 28.5312°  
 Long E 86° 34' 23.0664°  
 02/07/22 11:48 AM



Pattamundai, Odisha, India  
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 Long 86.572923°  
 31/05/22 10:33 AM



Pattamundai, Odisha, India  
 11, Pattamundai, Odisha 754215, India  
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 31/05/22 10:46 AM



Pattamundai, Odisha, India  
 HHFC+JXX, Pattamundai, Odisha 754215, India  
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Pattamundai, Odisha, India  
 HHFC+HR2, Pattamundai, Odisha 754215, India  
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 02/07/22 11:41 AM



Pattamundai, Odisha, India  
 T1, Pattamundai, Odisha 754215, India  
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 Long 86.573364"  
 01/05/22 10:42 AM



Pattamundai, Odisha, India  
 T1, Pattamundai, Odisha 754215, India  
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 Long 86.573364"  
 01/05/22 10:42 AM



Pattamundai, Odisha, India  
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 02/07/22 11:33 AM



Pattamundai, Odisha, India  
 HHFC+HR2, Pattamundai, Odisha 754215, India  
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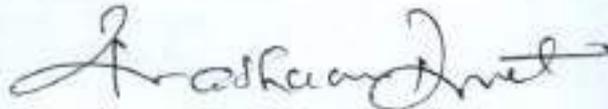
Pattamundai, Odisha, India  
 HHFC+HR2, Pattamundai, Odisha 754215, India  
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 02/07/22 11:43 AM



College  


Pattamundai, Odisha, India  
 HHFF+W7J, Baktapur Rd, Pattamundai, Odisha 754215, India  
 Lat N 20° 34' 28.3188"  
 Long E 86° 34' 22.3716"  
 02/07/22 11:37 AM

SIGNATURE OF THE GREEN AUDIT COMMITTEE MEMBERS



1. (Prof. Prabhakar Rout)  
Principal  
Principal  
Pattamundai College



2. (Dr. Jagyandatt Pati)  
DFO- Mangrove Forest Division( WL)  
Rajnagar  
Divisional Forest Officer  
Mangrove Forest Division (WL)  
Rajnagar

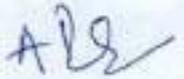
3. Dr. Fakir Chandra Pradhan, Reader in Chemistry & Coordinator Green Audit Committee.



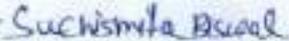
4. Dr. Sunil Kumar Pradhan, Reader in Chemistry & IQAC-Co-ordinator.



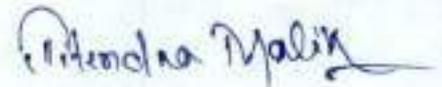
5. Sri Arabinda Pandab, HOD- Mathenmaties & Green Audit Committee Member



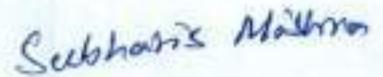
6. Mrs. Suchismita Biswal, Lect. In Botany & Green Audit Committee Member



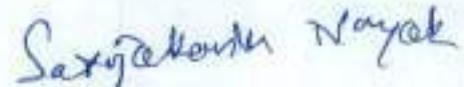
7. Sri Jitendra Malik, Lect. In Commerce & IQAC -Member



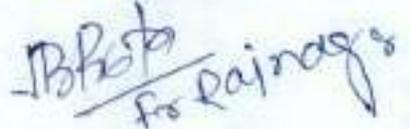
8. Sri Subhashis Mishra , Lect. In Economics & IQAC -Member



9. Sri Sarojkanta Nayak, Lect. In English & IQAC -Member



10. Sri Bijaya Kumar Patra, Forester ,Rajnagar



11. Sri Trideep Kumar Pradhan, Forest Guard , Rajnagar



# ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



# **BOY'S HOSTEL**

# ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



# **COLLEGE GARDEN**

# ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



## **COLLEGE GUEST HOUSE**

***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



**SPORTS & NCC ROOM**

## ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



## **COLLEGE POST OFFICE**

## ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



## **NCC GIRL'S UNIT ROOM**

***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



**OBC HOSTEL**

## ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



# **COVID HEALTH CENTRE**

## ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



## **GIRL'S HOSTEL ENTRANCE**

## ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



## **STAFF QUARTERS**

# ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



# **CULTURAL COMPETITION**

# **PATTAMUNDAI COLLEGE, PATTAMUNDAI**



# **ANNUAL DRAMATIC DAY**

# ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



# **COLLEGE PLAY GROUND**

# ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



# **INTER COLLEGE VOLLY BALL TOURNAMENT**

# ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



# **G.K COMPETITION**

## ***PATTAMUNDAI COLLEGE, PATTAMUNDAI***



## **MEHENDI COMPETITION**

**PATTAMUNDAI COLLEGE, PATTAMUNDAI**



**RONGOLI COMPETITION**

**PATTAMUNDAI COLLEGE, PATTAMUNDAI**



**RONGOLI COMPETITION**

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**RONGOLI COMPETITION**

# PATTAMUNDAI COLLEGE PATTAMUNDAI



## **MATHEMATICS SEMINAR HALL**



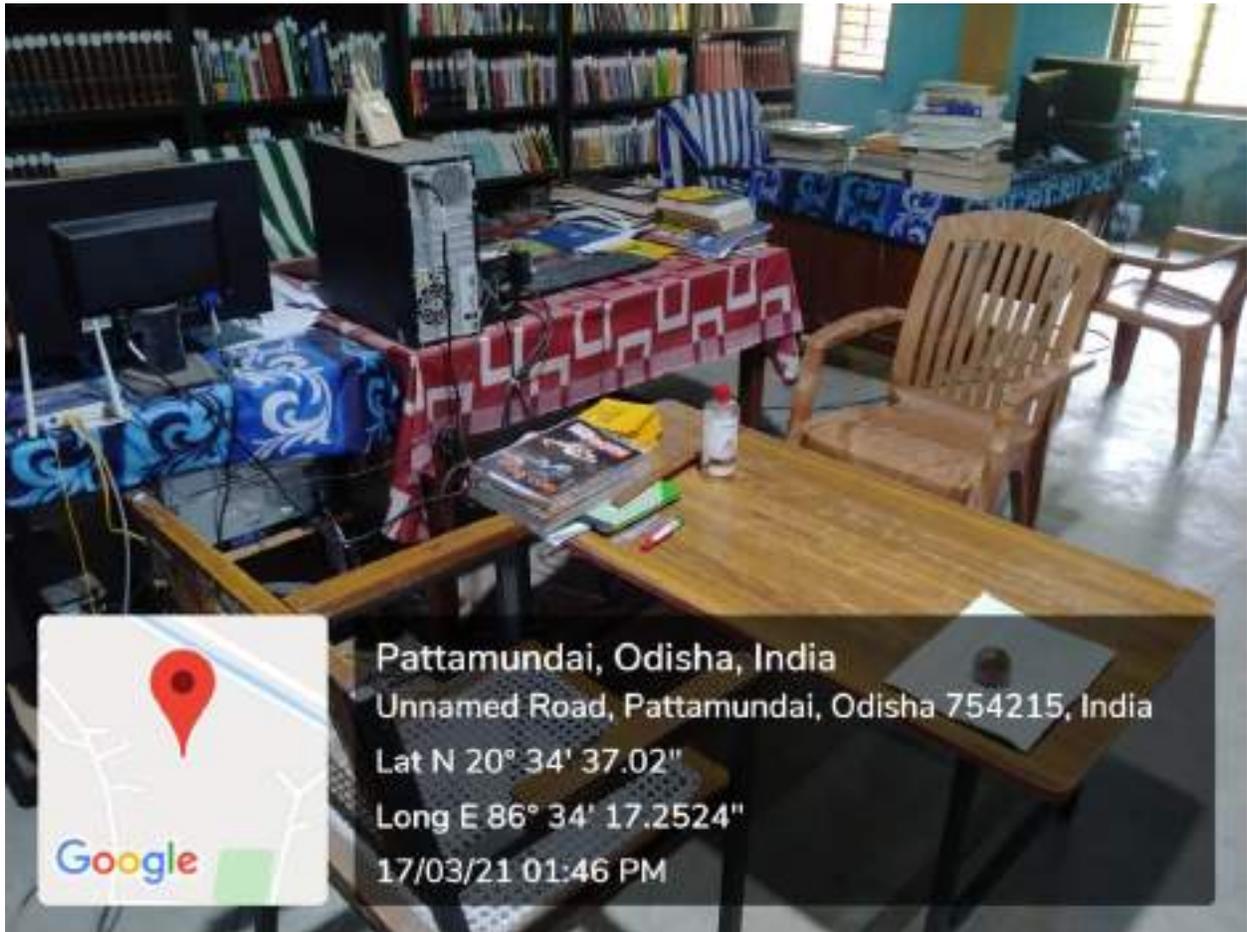
# COMMERCE SEMINAR HALL



# BOTANY SEMINAR HALL



# EXAMINATION CELL



# **CENTRAL LIBRARY**



# ACCOUNT SECTION



# IQAC ROOM



## **ESTABLISHMENT SECTION**



## **POLITICAL SCIENCE SEMINAR HALL**



# SAMS